

# MANUFACTURERS' RECORD.

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BALTIMORE, OCTOBER 19, 1894.

WITH this issue the MANUFACTURERS' RECORD begins the publication of a series of elaborate special articles upon European phosphates. In these articles the extent of developments in all European phosphate countries will be fully covered, with statistics of production, analyses, etc. These articles will prove invaluable to all who are in any way interested in phosphate matters.

### For the Nicaragua Canal.

The general assembly of the democratic societies of Pennsylvania, October 12, at Altoona, one of the largest and most enthusiastic ever held, responds to the appeal of the democratic clubs of North Carolina by the passage of a ringing resolution in favor of the Nicaragua Canal under American control as a democratic measure. The resolution asserts that every industry of that great industrial State which produces a pound of goods for export would be enormously benefited by the canal, and that Philadelphia and Pittsburg especially would make immense gains in the new trade thus opened to them.

### How to Secure Land Buyers.

Southern land-owners and agents, immigration companies and all others interested in attracting the attention of fruit-growers, farmers and business men generally in the Northwest and New England, should advertise in the *Southern States* magazine. Many thousand copies of every issue go into the Northwestern and New England States. It is turning the attention of thousands of people in those sections to the South, and putting them in communication with those who are advertising Southern properties in it. There is no other medium through which so many fruit-growers and well-to-do farmers interested in moving South can be reached as the *Southern States* magazine. It is published by the Manufacturers' Record Publishing Co.

## Dishonest Political Discussions.

Is it too much to look for honesty in political discussions? It seems to be. Many newspapers and many public speakers having the reputation of being honest and truthful in all other things, will knowingly misrepresent and distort and misstate everything that bears on political questions. It is not the truth they are after, but how to bolster up their side without regard to the real facts. This is to be expected from dishonest men and dishonest papers, but it ought not to be from those making any pretensions to honesty of purpose. The Baltimore Sun, in its bitterness against protection, in a recent editorial willfully misrepresents the facts in order to uphold its arguments, or else it is guilty of gross ignorance. The Sun says:

The ablest exponents of the protective system have indeed usually dwelt with emphasis on what they assumed to be the selfish interest of the manufacturing sections of the country to stand together and resist "the solid South," whose interests, as they have been at great pains to show, were essentially agricultural, and hence best promoted by lower tariffs and freer commerce. \* \* Still it contains a half truth to say, as the foremost republican leaders have quite generally been in the habit of saying, that the material interests of the South are opposed, naturally and of necessity, to high tariffs.

The MANUFACTURERS' RECORD challenges the Sun to produce any evidence that any able exponent of the protective system has ever been at great pains to show "that the South's interests were best promoted by lower tariffs." On the contrary, it is universally claimed by every advocate of protection that the South would be benefited by a protective tariff; that it is only by wise protection that its industrial interests can be fully developed, and that the advancement of its industrial interests is absolutely essential to the prosperity of its agricultural. This has been persistently advocated by all leading protectionists, and yet the Sun absolutely reverses the whole situation, and claims that the protectionists have been at great pains to show that the South would be benefited by free trade. This is wholly false, and the Sun must know it. It is the free-trade advocate who claims that the South's interests would be bettered by free trade. Will the Sun give the name of a single republican who has ever claimed that "the material interests of the South are opposed naturally and of necessity to high tariffs?" It claims that the foremost republican leaders have quite generally done this. Can it name even one? The Sun says:

Where does Mr. McKinley find any evidence that the South has been benefited by protection? The census of 1890, compiled by republican officials, completely refutes his assertion. It shows that the accumulation of wealth from 1880 to 1890 was steadily greater in the manufacturing States than in the agricultural States. Take four typical Northwestern States—Nebraska, Iowa, Illinois and Indiana—and five typical Southern States—Louisiana, Mississippi, Alabama, Georgia and North Carolina—and we find that, with

fifty-eight times as much land, they had among them in 1880 twice as much capital and seven times as much population as Massachusetts. Yet the census testifies that from 1880 to 1890 those nine States increased their assessed valuation by \$559,341,974, while the one State of Massachusetts increased its assessed valuation by \$569,377,824.

In this case the Sun bases its arguments on false premises and thus wholly misrepresents the facts. The assessed valuation is not the correct basis on which to make a comparison. In one State the assessment may be nearly equal to the true valuation, and in another less than one-half or one-third. In Massachusetts, for instance, the assessed valuation is almost equal to the true valuation, while in Illinois it is only one-fourth, according to official reports. Taking, therefore, the true valuation for the States named by the Sun, we have:

TRUE VALUATION ACCORDING TO UNITED STATES CENSUS.

States.	1890.	1880.
Nebraska.....	\$1,275,685,514	\$ 385,000,000
Iowa.....	2,287,348,333	1,721,000,000
Illinois.....	5,066,751,719	3,210,000,000
Indiana.....	2,095,176,626	1,681,000,000
Louisiana.....	495,301,597	382,000,000
Mississippi.....	454,242,688	354,000,000
Alabama.....	622,773,504	428,000,000
Georgia.....	852,409,449	606,000,000
North Carolina.....	584,148,999	461,000,000
Massachusetts.....	\$13,733,838,429	\$9,288,000,000
	2,803,645,447	2,623,000,000

Thus the true valuation of the nine States selected by the Sun made an increase from 1880 to 1890 of \$4,510,000,000, against an increase in Massachusetts of only \$180,000,000. Continuing, the Sun says:

It is as true of tariffs as of trees that "by their fruits we shall know them." The farmers of the United States owned \$5,000,000,000 of the \$8,000,000,000 which was the total assessed valuation of the country in 1850. In 1890 they owned only \$15,000,000,000 of the \$62,000,000,000 which was then its total assessed valuation, and of that \$15,000,000,000 they really owned only \$9,000,000,000, for the rest was covered with mortgages. Those figures tell the story of the reduction of the farming wealth of the country from over one-half to about one-sixth of its whole valuation under tariffs, in making which, according to McKinley, his party "never overlooked a single Southern interest." Another thirty years of such "devotion to all the material interests of the South" and they would be wiped out altogether—killed by republican kindness.

That is demagogism pure and simple. The MANUFACTURERS' RECORD, be it understood, is not arguing in favor of the republican party or any other party, but simply against demagogic misstatements. Suppose the farmers of the United States did own one-half of the wealth of the country in 1850, and that they own only one-fourth now (though none of these figures are entirely correct), that is no proof that they have not prospered. The railroad wealth and the wealth created by the enormous increase in city growth have not reduced the prosperity of farmers, but have, of course, resulted in a reduction of the percentage of their wealth to the total. Has the wealth of Southern farmers, for instance, been reduced by the growth of mining, manufacturing and railroad interests during the last ten years? The

question answers itself, and yet the percentage of farm wealth to the entire wealth of the South is necessarily less than ten years ago. Percentage as a basis of argument is a delusion unless its limitations are fully recognized.

Discussing the decline in prices of farm products, the Sun seeks to ignore the universal decrease in values. It says: "The past twenty years of protection have seen the price of wheat decline from \$1.47 to fifty cents a bushel, cotton from twenty cents to six cents a pound, and other staple products of agriculture in like measure." But it entirely omits the decline in manufactured products, which has been even greater than in farm products. It forgets to say that a bushel of wheat at fifty cents will buy just as much today as it would have bought at \$1.47 twenty years ago. Probably it has never heard that steel rails have declined in that period from about \$160 a ton to less than \$30, and other manufactured products in proportion.

A political speech recently made by Senator Chandler in favor of the republican party and against free trade and the South is even more demagogical than the Sun's editorial, because, in addition to false statements, it seeks to arouse sectional hatred. Senator Chandler denounced the South as seeking, by its "Confederate brigadiers," to destroy the industrial interests of the North; that the tariff bill was designed to give protection to Southern products, but free trade on Northern. "One object," he asserted, "of the Southern tariff destroyers was to reduce the wages of labor." Now, Senator Chandler knew that this was false, just as the Sun knew that it was guilty of misrepresentation.

### "How to Develop the South."

Elsewhere in this issue there is published a letter on "How to Develop the South," which is worthy of thoughtful attention by every man interested in the prosperity of this section. Those who have watched the progress of fruit culture along the Seaboard Air Line system and noted the large number of Northern and Western people settling in that section will be interested in the points suggested in this article, which is written by a gentleman who has been intimately identified with the Seaboard Air Line work. Two or three points made in his letter are especially worthy of attention. It is suggested that if a North Carolina tobacco company, which has been credited with spending \$300,000 a year to advertise its tobacco, can make a profit by such an extensive outlay, and if a great jewelry house can make a world-wide reputation by its advertising simply for the sale of jewelry, how much more reason is there for the States and counties of the South, which have such unlimited undeveloped



wealth needing capital and settlers, to advertise to the world, and to do it persistently and judiciously. Another suggestion is that every county in the South should have at least one man under salary whose sole duty would be to seek by all possible means to attract attention to the county and aid in its upbuilding. "Every county," says the writer, "employs a sheriff to arrest people, a treasurer to take care of its money and a register of deeds to look after its land papers, but there is not a single county in the Southern States which has a man employed whose business it is to devise the means for the general development and advancement of the county." It is also pointed out that it is great folly for Southern people to spend money spasmodically in advertising, expecting to reap immediate results; that any county or city that starts out to advertise for one year only under the idea that it will accomplish all that is necessary within that time is wasting its money, and that the towns and counties that stick at it and determine to keep at it are the ones that will reap the harvest. Readers of the MANUFACTURERS' RECORD will remember an interview with a New York banker, published a few months ago, in which he took the ground that until the people of the South spent money in advertising as freely as Western people did for so many years, the South would fail to reach the full measure of its capabilities. That interview and the article published today should be studied together.

#### Build the Nicaragua Canal.

The MANUFACTURERS' RECORD comments to its readers the following from the editorial columns of the Worcester (Mass.) Spy, especially the facts regarding the shipment of cotton via the Northern Pacific Railroad and thence to Japan:

The war between China and Japan has demonstrated anew the importance of an early completion of the Nicaragua Canal. If it had been open within a fortnight after the first outbreak war ships and steamers laden with supplies for both nations would have been passing through it, the beginning of a steady procession of ships that would have continued utilizing the short route until hostilities ceased; all this a traffic for the canal lay in the large regular commercial business that will certainly begin with its opening, and keep pace from year to year with the increase of commerce between the nations of the world.

Two items of news from far-apart places prove in another way the importance this canal will assume to the trade of the United States. Recently the British consul at Tokio, Japan, made an official report concerning cotton manufacturing in that country which shows that it is a great and growing industry, employing a multitude of people; that the mills are run continuously, the day and night shifts each working twelve hours, and that the wages paid the women operators average but seven cents per day. That country is putting up new plants, ordering new machinery and fast adding to its producing capacity.

A Duluth paper, referring to the increasing freight traffic of the Northern Pacific Railroad, incidentally mentions as an interesting item the fact that during the past summer fifty carloads of Southern cotton have been shipped by that road for exportation to Japan, and that this is the opening of a new market for American cotton.

Had the Nicaragua Canal been built that cotton would not have been carried from Southern fields to the far Northwest, then railroaded across the country to Puget sound and put aboard the subsidized line of British steamers for delivery at a Japanese port. And when the canal shall be opened to business great steamships will load cargoes of this staple at Mobile, New Orleans and Galveston and deliver them in Japan or wherever else on the Pacific coast there are cotton manufacturers. And as with this one staple of commerce so with all other products of labor or skill the States east of or bordering on the Mississippi may be able to contribute to our trade with Asia and Australasia. The canal will provide the cheapest available route for their traffic and open almost numberless markets to their enterprise.

#### Settling in the South.

An illustration of how population is tending South is seen in the section of country south of Raleigh, N. C., known as the Sand Hills, along the Seaboard Air Line, which is having a remarkable development. One of the most recent purchases of real estate in this locality is that of the Atlantic Land Co., of Boston, Mass., which has a capital of \$250,000. This company will put 1000 acres in orchards and vineyards; 640 acres will be set aside as a town site. Arrangements have been made by the company for starting a large educational institution, which will own 300 acres of land; this will be cultivated in fruits and early vegetables, and the revenue from it will go a considerable way towards supporting the institution. A somewhat similar undertaking is to be started near Aberdeen; the land has been bought and paid for by a colony headed by Mr. Eugene Leavitt, of New Hampshire. Dr. Van Rensselaer, editor of Medical Annals, of Albany, N. Y., and Mr. R. G. S. McNeill, of Bridgeport, Conn., have organized a company and purchased 1500 acres of land. They are clearing about 600 acres of it, which they will put out in fruit. In addition to growing fruit and vegetables on a large scale, they will have canning, wine-making and evaporating factories; they will ship fruits and vegetables early in the season when prices are high, and later crops will be canned or used for making wine, brandy and vinegar, or for evaporating. The Niagara Grape Co., located near Niagara Falls, New York, has purchased 400 acres. About 100 acres of this have been cleared and put into vines; \$50,000 has been put into this enterprise. Other parties from the same portion of New York have purchased land adjoining that of the Niagara Grape Co., and quite a colony of fruit-growers will be located around them. Dr. B. Van Heff, of New York city, has bought 5000 acres of land not far from that of the Niagara Grape Co. Dr. Van Heff expects to settle colonies of German families on his property. Capt. A. M. Clark, representing a Pennsylvania company, has purchased several hundred acres of land. Mr. S. N. Hooper, of Vermont, has also purchased several hundred acres, and has put out a hundred acres to nut-bearing trees. He is also putting out a large acreage in peaches, grapes, strawberries and other fruits. Mr. Benjamin Douglas, attorney for R. G. Dun & Co., of New York, has purchased 1100 acres, which he expects to cultivate in fruits and early vegetables. Mr. James H. Murray, from Ohio, and of the Standard Oil Co., has purchased 300 acres, part of which he has cleared, and is putting it into grapes and fruits. Messrs. Charles Young, of Franconia, N. H.; B. B. Thurston, of Franklin, N. H.; F. A. Dimmick, of Yonkers, N. Y.; C. J. Eaglesfield, of Ohio; P. A. Stebbins, of Pennsylvania; C. W. Weaver, of Shamokin, Pa.; Charles Merritt, of Meriden, Conn.; Thos. Carleton, of Littleton, N. H.; A. A. Newhall, of Woburn, Mass.; J. T. Wilson, of Bradford, Vt.; W. B. Easton, of Sutton, Vt.; W. P. Sweet, of Perryville, Conn., and H. P. Bilyeu, of Philadelphia, Pa., are a few among many Northern, New England and Western people who have bought land in this vicinity for fruit-growing. These

facts show what is being done in settling up one section of the South.

#### A MORE ELASTIC CURRENCY.

The "Baltimore" Plan for a Safe and Elastic National Currency.

The most important action taken at the Baltimore convention of the American Bankers' Association was the adoption of a plan for securing a greater elasticity of the currency by amendments to the national banking laws. The plan was formulated by the Baltimore Clearing-House Association, and was adopted by a resolution offered by Mr. A. P. Hepburn, ex-comptroller of the currency.

In view of the general importance of the action taken we publish the plan presented. It provides for the following amendments to the national banking act:

"Section 1.—The provision of the national banking act requiring the deposit of bonds to secure circulating notes hereafter issued shall be repealed.

"Sec. 2.—Allow the banks to issue circulating notes to the amount of 50 per centum of their paid-up, unimpaired capital, subject to a tax of one-half of 1 per centum per annum upon the average amount of circulation outstanding for the year, and an additional circulation of 25 per centum of their paid-up, unimpaired capital, subject both to the tax of one-half of 1 per centum per annum, and to an additional heavy tax per annum upon the average amount of such circulation outstanding for the year; said additional 25 per centum to be known as 'emergency circulation.'

"Sec. 3.—The tax of one-half of 1 per centum per annum upon the average amount of circulation outstanding shall be paid to the treasurer of the United States as a means of revenue, out of which the expenses of the office of the comptroller of the currency, the printing of circulating notes, etc., shall be defrayed.

"The excess over one-half of 1 per centum of the tax imposed upon the 'emergency circulation' shall be paid into the 'Guarantee Fund,' referred to in section 6.

"Sec. 4.—The banks issuing circulation shall deposit and maintain with the treasurer of the United States a 'Redemption Fund' equal to 5 per centum of their average outstanding circulation, as provided for under the existing law.

"Sec. 5.—The redemption of the notes of all banks, solvent or insolvent, to be made as provided for by the existing law.

"Sec. 6.—Create a 'Guarantee Fund' through the deposit by each bank of 2 per centum upon the amount of circulation received the first year. Thereafter impose a tax of one-half of 1 per centum upon the average amount of outstanding circulation, the same to be paid into this fund until it shall equal 5 per centum of the entire circulation outstanding, when the collection of such tax shall be suspended, to be resumed whenever the comptroller of the currency shall deem it necessary.

"The notes of insolvent banks shall be redeemed by the treasurer of the United States out of the 'Guarantee Fund,' if it shall be sufficient, and if not sufficient, then out of any money in the Treasury, the same to be reimbursed to the Treasury out of the 'Guarantee Fund' when replenished, either from the assets of the failed banks or from the tax aforesaid.

"National banking associations organized after this plan shall have gone into operation may receive circulation from the comptroller of the currency upon paying into the 'Guarantee Fund' a sum bearing the ratio to the circulation applied for and allowed that the 'Guarantee Fund' bears to the total circulation outstanding, and to be subject to the tax of one-half of 1 per centum per annum, as called for by the treasurer of the United States for the creation and maintenance of this fund.

"No association or individual shall have any claim upon any part of the money in said 'Guarantee Fund,' except for the redemption of the circulating notes of any insolvent national banking association. Any surplus or residue of said 'Guarantee Fund' which may be hereafter ascertained or determined by law shall inure to the benefit of the United States.

"Sec. 7.—The government shall have a prior lien upon the assets of each failed bank and upon the liability of shareholders for the purpose of restoring the amount withdrawn from the 'Guarantee Fund' for the redemption of its circulation, not to exceed, however, the amount of the failed bank's outstanding circulation after deducting the sum to its credit in the 'Redemption Fund' (section 4), already in the hands of the treasurer of the United States.

"Sec. 8.—Circulation can be retired by a bank at any time upon depositing with the treasurer of the United States lawful money in amount equal to the sum desired to be withdrawn, and, immediately upon such deposit, the tax indicated in sections 2, 3 and 6 shall cease upon the circulation so retired.

"Sec. 9.—In the event of the winding up of the business of a bank by reason of insolvency or otherwise, the treasurer of the United States, with the concurrence of the comptroller of the currency, may, on the application of the directors or of the liquidator, receiver, assignee or other proper official, and, upon being satisfied that the proper arrangements have been made for the payment of the notes of the bank and any tax due thereon, pay over to such directors, liquidator, receiver, assignee or other proper official, the amount at the credit of the bank in the 'Redemption Fund' indicated in section 4."

#### HOW TO DEVELOP THE SOUTH.

Spasmodic Work a Failure—Persistent Energy Needed—What Can Be Accomplished by Sticking at It.

In a letter to the MANUFACTURERS' RECORD giving some facts about the great number of Northern people who have of late years settled along the Seaboard Air Line, Mr. John T. Patrick says:

"I could give you names of several hundred others who have settled on the Seaboard Air Line, and are going ahead making satisfactory results. These people represent several million dollars, and their coming shows the value of persistent, steady advertising. The trouble with our Southern people is that they issue a prospectus of what they propose to do, or a circular setting forth the attractions of their town and section, or a list of farm lands for sale. They distribute this matter in uncertain ways, and expect that results will come from their efforts. They will advertise for a month or a year, and expect a single advertisement or a year's advertisement in one or two publications to build up their county, bring in hundreds of settlers and develop their section, and, not succeeding in their expectations, they get disheartened and quit trying.

"Representing only a land company, I give my entire time and attention to the subject of development. I try to do it in a practical, economical way. I have been giving my time so far to induce people who had invalids in their families to come South, and therefore I have advertised only in medical and religious publications. I have advertised in medical publications because they reach the physician, and he in his turn reaches the invalid. We have standing advertisements in about twenty medical publications and in many religious papers. We are in constant communication with the physicians, so much so that we have nine of the best type-writers, and they get little rest from morning until night. The reason that we advertise in the religious publications is that we wish



to reach the ministers, whom you know go to see the family that has a sick person in it. Now, if I were trying to develop manufacturing enterprises I would take a line of papers, starting in with the MANUFACTURERS' RECORD and following up with fifteen or twenty of the prominent industrial journals, so that I could reach the parties who are in the manufacturing business, and I would not expect a single year's advertisement in your publication to bring the desired result. If I wanted settlers, farmers, merchants and others from the West, Northwest or New England, I would use the *Southern States* magazine. Only constant accurate work and persistent advertising will develop any enterprise. If the Blackwell Durham Tobacco Co., the American Tobacco Co. or any similar firm should undertake to advertise for twelve months and quit, it would find its business falling behind. Almost everyone in the United States knows of the Tiffany jewelry establishment, which has for sale only jewelry and similar lines of goods. That firm spends more money in advertising than the most enterprising city or State government in the South spends in advertising the attractions and advantages it has to offer new people, yet we have much more at interest than Tiffany, a thousand times over. For instance, North Carolina has at least 25,000 square miles of idle land, which, if brought into cultivation, would lessen the burden of taxes more than one-third and enable us to secure good roads, and having good roads would save the farmers and landowners in each county in the State at least \$10,000 annually in the way of wear and tear on buggies and wagons. In saying \$10,000 in each county I would probably under-estimate by more than three-fourths, but say that my estimate is full, we would have \$96,000 saved to the farmers and landowners. In addition, there would be enough people to have excellent schools in each school district in the State. In selling 25,000 square miles of property in North Carolina we would bring into the State at least \$50,000,000 that would go directly to our North Carolina land-owners. It does seem to me that with these facts, for they are facts, our Southern legislators ought to be willing to devote a sufficient amount of money to advertise what we have for sale. Certainly they ought to be willing to spend as much money in advertising North Carolina as the Blackwell Company in advertising its tobacco.

"My report as State agent of immigration, made several years ago, showed that I had brought in for two years' work enough capital, the taxes of which, at our regular rates, would amount to more than \$40,000 annually. This was not a mere statement on my part. I had learned the facts from the people coming in and showing how much money they had invested in the State, and they did not estimate the amount of money they had brought into the State in the way of bonds, stock and capital uninvested. At the time of my report, two or more North Carolina papers questioned some particular item in regard to investment. I was able to bring forward facts proving that my estimate was an under-estimate. I knew at the time I was making the report that some fault-finders would question the truthfulness of the report; therefore, I fortified myself with ample proof of every item of investment.

"It seems to me that every county in the South ought to be willing to employ one man to look after its development and up-building. Counties will employ a sheriff to arrest people, and a treasurer to take care of their money, and a register of deeds to look after their land papers, but there is not a single county in the Southern States that I know of which has a man employed whose business it is to devise the means for the development and advancement of the county. At my native home in this State I

proposed to be one of ten men who would give a thousand dollars a year to employ a man for ten years to have nothing to do but to talk and work for the town. There was a gentleman whose service could have been secured, who said he would guarantee to get at least one factory during the first year of his employment, or he would not accept a cent of compensation. When I made the proposition I had been away from my home for a number of years and had but little financial interest in the section, but I was willing to be one of ten men who would give \$100 a year for ten years for the development of the place. I knew that one year's work would be of but little advantage, but I was confident if the town had a man employed who knew that everybody was looking to him to do something for the development of the place, that he would certainly succeed in raising the necessary means for advertising to such an extent that some real good would be accomplished. I repeat that there can be nothing done, or very little, by a spasmodic effort for development. It must be a steady, constant work. I have been continually adding to my force of workers in a quiet, easy way until there are now more than fifty people who are giving their entire time to the efforts that are being made directly through me, and from month to month the work is enlarging and growing in a steady manner. I started in a section where almost everyone predicted a failure. Even the late Mr. Jno. M. Robinson, who was president of the Seaboard Air Line, said to me when I told him what I proposed to do, that although he was willing to give me every facility that lay within his power, he felt that I could not succeed in the poor sand-hill section of his line of road, and advised me to make my efforts in another direction, where the people were more prosperous. But I was confident that I could succeed. I went in for success. I knew that I was not going to get it in twelve months, and, above everything else, I was determined not to stop until I had succeeded."

#### In West Virginia Coalfields.

The Lynn Coal & Coke Co. is among the new West Virginia concerns operating in Logan county. The Logan Consolidated Coal & Coke Co. will operate in the same field, and referring to this company's plans, Mr. Audley H. Stow, M. E., writes as follows:

"The company is just now starting work on its plant. It has leased in the neighborhood of 3100 acres of land on Mate creek, in Logan county. Mr. Walter Graham, also vice-president and superintendent of the Bluefield Electric Light Co., is president and general manager of this new coal company. Mr. Herbert Hunter is the superintendent. At the point at which this company will make its first opening, what is called locally the Thacker vein, but which would seem to be the middle Kittanning, has a thickness of five feet of solid clean coal. Although free of slate, the vein has, one might say, three benches—an upper one of gas coal, a middle bench of most excellent block-splint and a lower bench again of gas coal.

"At the tippie this vein will be 350 feet above the track. Sixty feet vertically below the five-foot vein comes in the lower Kittanning, three feet three inches of clean gas coal at the tippie, four feet ten inches also clean at another part of this property, so that this operation will be enabled to supply splint coal for steam and domestic use, as well as a gas and coking coal. The first opening will require a mile and a-half of track, work on the grading for which will be commenced shortly.

"The splint from Thacker has been very favorably received by the market, while the gas coal would appear to be identical with that which the Pearl Mining Co. is

now shipping from Dingess with so much success, so that it may be said the new company starts in with quite a bright prospect."

#### Important Enterprises at Norfolk.

[Special Cor. MANUFACTURERS' RECORD.]

NORFOLK, VA., October 6.

If all the cities in the South are progressing as rapidly as this one, the Southern era of prosperity will be even greater than the MANUFACTURERS' RECORD has predicted. Perhaps never before in its history has Norfolk and vicinity had a brighter outlook. It truly seems to be on the threshold of a remarkable period of activity in commerce and manufacturing, as may be judged by the following enterprises which are briefly outlined:

One is an elaborate scheme to centralize the various business bodies of the city by locating them in one building. This is probably an assured fact, as the site has been secured and part of the money pledged for the structure. It is to be located on Granby street, and will cost \$150,000. The six floors will include several large stores on the first, also store-rooms on the second, apartments for associations on the third and fourth and offices on the fifth and sixth. The upper stories will be of brick, and the lower of dressed stone, while the whole building will have elaborate stone trimmings. It will be provided with two elevators, will be finished in hardwood, and will have all the features of a modern office building. One of the largest dry-goods firms in the city has agreed to rent the first two stories, the Business Men's Association, Chamber of Commerce, Cotton Exchange and probably Real Estate Exchange will occupy the third and fourth, and several of the offices on the other floors have already been spoken for by prospective tenants. This assures rental enough to pay for more than the interest on the bonds which will be floated by the company which will erect the building.

Plans have also been prepared for an apartment-house, which will cost about \$100,000. It will be six stories high, with elevators, will be built of brick and stone, and will be one of the finest houses of its kind in the country.

It is generally believed here among those best posted that the Chesapeake & Ohio Railroad Co. is about to improve the \$600,000 worth of property it bought through D. McCormick & Co. about a year ago. The property has one of the best water fronts in the city, and the supposition is that it will be converted into a large union depot and terminal docks, with ships for receiving and shipping carloads of freight in bulk by transfer barges. The depot would contain divisions for the Chesapeake & Ohio, New York, Philadelphia & Norfolk, Seaboard Air Line, Atlantic Coast Line, Norfolk & Southern and possibly Norfolk & Western; in fact, would be a general point of arrival and departure for all ferries connecting with trains, in connection with a cotton warehouse and docks for ocean steamships. Experts estimate that \$750,000 to \$1,000,000 will be spent on these improvements when made. A significant fact is that the Chesapeake & Ohio people have not renewed any long-time leases to tenants of this property, and will not do so for more than three months at a time, indicating that they contemplate taking possession at an early date.

One of the most important reports is that John Wanamaker, of Philadelphia, intends opening a store here modeled after his great establishment, but, of course, on a smaller scale. His representatives, it is stated, have purchased a large property, which will be remodeled into a modern business-house. It is a large building, four stories high and well located for a general store. This shows how Northern merchants regard Norfolk as a

trade centre. The property is worth fully \$40,000.

The cotton mill located on the Seaboard Air Line, in the suburbs of Portsmouth, is nearly ready for machinery. The building and chimney are about completed. The company was organized on the co-operative plan, and most of the stockholders are railroad men connected with the Seaboard Air Line. J. H. Whisnant, of Portsmouth, is president of the company. Steam will be the power.

The extensive chemical works and the brewery have already been noted in the MANUFACTURERS' RECORD.

The Norfolk electric railway is nearly ready for rolling stock, and in a few weeks the principal parts of the city will secure the benefits of rapid transit.

D. ALLEN WILLEY.

#### The Richmond (Va.) Coal Basin.

A paper by E. J. Schmitz, a well-known mining engineer and geologist, of 164 East Eightieth street, New York city, published in the transactions of the American Institute of Mining Engineers, gives an interesting sketch of the Richmond (Va.) coal-field, evidencing considerable research and personal investigation by the author. The opinions given in the paper on the structure of the field and the hypothesis upon the coal formation of the field are, so far as known, quite new. The mining of the Triassic coals of the Richmond basin has been carried on upon a larger or smaller scale for more than 100 years. The basin comprises about 189 square miles, being twenty-four to thirty-one and a-half miles in length by five and a-half to ten miles in width. Notwithstanding the close proximity of the field to a large city and to tide-water, assuring both a good home market and cheap transportation, and notwithstanding the good quality of the fuel and the great thickness of the principal bed developed and worked, operations in this field have never assumed great prominence. Speaking of this, Mr. Schmitz says:

"The practical mistakes which have been committed undoubtedly in a number of the mine operations of the past do not explain the unsatisfactory success and progress of the industry of this field; nor can it be ascribed to lack of local enterprise. Other reasons have to be looked for, and, as a principal one, the irregularity and the faulted conditions of the coal deposits must be pointed out. As a second cause, the indifference of the State government, which leaves the development of the field entirely to private enterprise, instead of aiding it by systematical and practical geological investigations, deserves to be mentioned."

Clover Hill and Midlothian are the principal districts in which mining is being carried on, and are located along the eastern edge of the basin. In the Clover Hill district there are three distinct beds of coal. The seam is three to four and a-half feet; from ten to thirty feet below this is the main seam, which is from seven to twenty feet, and at another interval of from forty to fifty feet is the bottom seam, which is reported as from four to six feet. The coals of the first two seams are hard bituminous coals of square cleavage and fracture, nearing the "splint" in hardness and showing coking qualities. The upper seam carries the cleaner and harder coals, while the main seam, it is stated, sometimes contains considerable pyrites. This is said also to be so with the third seam. The practical value of the field as a coal producer, Mr. Schmitz says, depends, of course, principally upon the coal areas which can be opened and made accessible to the shafts and slopes of each of the several mines; and it seems that the chances are better nearer to the centre than to the edges of the field. It is to be regretted that no systematical boring operations have ever been made across the field to the centre of the basin.



## SOUTHERN TEXTILE INTERESTS.

[A complete record of new textile enterprises in the South will be found in the Construction Department, on pages 186 and 187.]

## EGYPT AS A COTTON-GROWER.

Possible Influence on Southern Cotton-Growing—Some Suggestions as to Improving Our Staple.

With the frequent discussions and steps towards the manufacture of finer cotton goods in the South, there seems to be a lack of interest in the production of a grade of cotton that would supplant the Egyptian fibre, whose consumption in this country has approached in value nearly \$3,000,000 yearly, and for which in many foreign markets there is a decided preference. This feature has been overlooked, probably because its effect at home has as yet been unappreciable. Conditions are, however, varying so rapidly that the cotton planter, as well as the cotton manufacturer of the Southern States, must no longer be content with being a controlling factor in ordinary grades of products. Egypt is planning to become a great producer of the staple, and the character of the fibre grown in that country will make it a serious competitor. There are, however, many obstacles in the path of that country to be overcome before its production of cotton can be materially increased. In an interesting article in the October number of the North American Review, Hon. Frederick C. Penfield, United States diplomatic agent and consul-general to Egypt, points out the possibilities for cotton-growing and shows what steps are being taken to utilize these opportunities. His treatment of the subject brings out some wholesome suggestions on the production in larger quantities of a finer staple in the Southern States. The picture he draws of the Egyptian cotton-grower is a graphic one and shows him to be little better than a slave, divorced from the comforts and necessities of civilization. Egypt is now in the midst of a revolution, and the twentieth century will dawn on a new and prosperous Egypt. The great moving force in this revolution is to be irrigation, and the scheme as conceived is of a magnitude that will place the project on a par with the building of the Pyramids and the Suez Canal. It provides for doubling the cultivable area of a country dependent on the soil. Egypt has upwards of 400,000 square miles, but the practical Egypt, that which sustains life, is not as large as the States of Massachusetts and Connecticut together. This is the ribbon-like strip of alluvial land bordering the Nile, and forming, strictly speaking, an elongated oasis in the desert. As is generally known, Egypt is almost rainless and dewless. The value of the Nile was appreciated by Samuel Baker, the noted English traveller, who, in giving an account of his researches in equatorial Africa, says: "The Nile might be so controlled that the enormous volume of water that now rushes uselessly into the Mediterranean might be led through the deserts to transform them into cotton-fields that would render England independent of America." To so utilize the waters of the Nile a commission of three European hydraulic experts and the department of public works of Egypt are now devoting their energies. Of the plans which were submitted, four contemplated the construction of a dam across the river, and another, presented by Cope Whitehouse, an American engineer who has spent nearly ten years in studying the problems to be encountered, proposed to employ a depression in the desert, which, when filled, would be as large a body of water as Lake Geneva, in Switzerland. The commission reported in favor of building a dam seventy feet high at Assouan. Much opposition has developed against this site, as it would destroy the ruins of

the I-land of Philae, a spoilation that would be deplored by every lover of ancient relics, these ruins being the most imposing and beautiful monuments of upper Egypt.

It is estimated that \$15,000,000 will be required to complete a Nile dam and its canals, and the money is actually in hand, the result of economy affected by the recent conversion of the nation's debt from a high rate of interest. After the carrying out of this great work there still remains an obstacle. The query is made, Where is the increase of labor to till the double Egypt to come from? Irrigation is not going to supply it, and it is not easy to induce the people of the Soudan and Nubia in any numbers to take up husbandry under Egyptian masters. Mr. Penfield looks to labor-saving machinery to solve the problem. He says:

"Perennial irrigation is agreed upon by all taking part in the country's management, and it means much to the United States of America if those assisting the Khedival government possess the opinion expressed by their countryman, Explorer Baker, thirty years ago. Every acre wrested from the desert by the magical mud and water of the Nile will be capable of producing a bale of cotton superior enough to command a quick market, presumably to the exclusion of a bale of American-grown cotton, for Egypt is already our aggressive competitor in that important fibre.

"Whatever the crop may be in the Southern States, it surely is 'king' in Egypt, with the Delta of the Nile for its throne. The soil and climate are so perfectly adapted to cotton-raising that it is the governing crop, and brings enough money to the country to indirectly pay the interest on the enormous debt created by the lavishness of Ismail, and is so surely redeeming the land from the grasp of its creditors that Egyptian bonds have sold at a premium during the recent times of financial distrust.

"Eight or ten years ago Egypt was insolvent; today she is bristling with prosperity. The position of the fellahen is constantly improving. The corvee is abolished, and the people have no more compulsory labor, except to keep the Nile within bounds at high flood, for which they are paid. The land taxes are gradually being reduced, and extortion and corruption seem to have been stamped out. She sells cereals enough to pay for the imported articles necessary to maintain her simple standard of life. I can't help thinking that cotton, or the money it produces, has played a part of no small importance in the work of administration that has brought all these blessings.

"A bird's-eye view of the area of cotton cultivation would give the outline of a half-open fan. From the point of the Delta, near Cairo, it stretches nearly to Port Said on the northeast and beyond Alexandria on the northwest, this simile being helped by the great arc curving into the Mediterranean, the narrow strip devoted to cotton along the Nile from Cairo, a hundred miles southward, forming the handle. This area is veined with innumerable canals branching from the Rosetta and Damietta arms of the Nile, which distribute the vitalizing waters.

"The soil, first created by the deposits of the great river and ever fertilized by it, is perhaps the richest in the world, and is tilled with such ease and certain results as to compel the New Englander who sees it to draw a comparison between farming at home and that occupation here. The Egyptian peasant is by instinct at once a farmer and an irrigation expert. With two or three primitive implements, such as a wooden trough, a mattock and a water-

hoisting 'shadoof,' his labors are blessed with success beyond the possibility of tillers of the soil elsewhere. The Nile, the cause of this fertility, brings from the Abyssinian mountains the deposit so wonderfully rich that other fertilizers are unnecessary, and the subsidence of the annual flood leaves the ground in a condition requiring scarcely more than a scratching with the plow to prepare it for planting. This done, the farmer has only to raise water daily from the river and direct it to the roots of his crops. Experience teaches him to 'rotate' cotton with a less exhausting cereal, and he never has drought, frost, labor or tariff questions or other serious menace to deal with. His family supplies most of the labor, the women taking a lighter share of the work. This peasant has few ordinary comforts. He subsists on a meagre vegetable diet, receives no governmental documents dealing with agricultural facts and statistics, has no need for newspapers—in fact, only knows how to read the Koran. His concern in life appears to be, with Allah's help, to grow a good crop, harvest it at the right moment and dispatch it to the nearest ginning establishment, get his cash or be released from financial obligations, pay his land tax and renew the lease of his farm. The land tax is heavy, and he has little money left after paying his rent to the landlord pasha living in Cairo or Alexandria.

"Added irrigation provided, what has been pictured as a half-opened fan—the Delta—may be unfurled on its western boundary almost indefinitely, and cotton would certainly have preference over other crops, as the Delta is given up to it. The incalculable increase of acreage there would come into definite competition with our country, while sugar and corn would naturally follow the alluvial extension between Assiout and Assouan.

"This year's cotton territory is at least 1,072,500 acres. As desert soil is reclaimed cotton cultivation is extended in preference to other crops, for Egypt's long staple commands a ready market at high prices. This accounts for the increase from 329,000 bales in 1882-83 to 680,085 bales in 1892-93. An Egyptian bale weighs from 700 to 750 pounds, against our bale of about 500 pounds.

"Good Egyptian cotton brings from one to two cents per pound more than American upland cotton, owing to its superior staple and silky appearance, and the entire stock is exported. Last year it realized upwards of \$45,000,000. About ten years ago Egyptian cotton was introduced into the United States, and its advantages so successfully explained to mill-owners of New England that the trade grew with astonishing rapidity, until the exportation from Egypt aggregated upwards of 42,000 bales in the season of 1892-93—the equivalent of more than 60,000 American bales—valued at over \$2,500,000, and constituting 2¼ per cent. of the staple consumed last year in America.

"To the casual reader this will be surprising, and he will be slow to believe that the United States, which produce twice as much as the combined crops of India, Egypt, Brazil, Peru, Turkey and the West Indies, ever imported a bale of raw cotton.

"This year's cotton area is the largest ever planted in Egypt, and I can predict the greatest crop in the country's record, namely, 700,000 bales, or equivalent of 1,050,000 American bales. This prognostication will reveal to one who analyzes closely that the Egyptian fellah gets what would be an American bale from an acre, while the Southern grower considers himself fortunate to secure a bale from two acres as cotton lands run. Overproduction has few terrors for the Egyptian, and he can stand a falling market better than the American grower.

"Those interested insist that the use of Egyptian cotton is not antagonistic to

home principles, for, with its strong staple, between an inch and an inch and a-half in length, it is employed in the production of fine underwear, balbriggan hosiery and fine threads requiring a finish for which home-grown cotton is unsuited. It gives to fabrics a gloss like silk, which makes it invaluable for use in cotton-mixed 'silk goods.' Further, it is claimed by those wishing to prove that it does not conflict with American cotton, that its use has developed a profitable business in manufactures for which the latter is not adapted; also that native-grown staple is utilized in a manner impossible without the imported article as a basis. What argument is made by Southern planters against the importation of this *coton de luxe* I am not informed. The Egyptian cotton has almost entirely superseded American cotton abroad for the production of lisle-thread goods. The extent of its introduction in this country would be enough to show that it must be making even greater headway abroad. Outside the United States, it is largely used where Sea Island was formerly.

"Resourceful America, I believe, can fortify her position in this matter. The Egyptian staple having an admitted value for special manufactures, why should not our agricultural genius meet the want? The suggestion is obvious to one aware of the enormous demand for the Egyptian fibre, which is clearly a favorite. Who can say it will not be the cotton of the future?

"With our range of climate and soil, any crop should be possible. One would suppose the Mississippi bottom lands would offer conditions approaching those of Egypt. I am glad to know that the Agricultural Department is taking a very active interest in this question. Experiments should be systematically pursued until the South can supply Northern mills with cotton as acceptable as that produced by the fellahen of the Nile. The prospect of offering this particular staple to Europe in competition with Oriental labor presents little hope, as possible reductions in land rent and taxation would give the Egyptian, content with a fraction of the pay of the workingman of the South, a lead not easily to be overcome, without reference to the quality of his cotton.

"A writer in a Boston journal, commenting on a recent communication by me to the State Department on the subject of the marvellous growth of the use in America of Egyptian cotton, goes into an analysis of the business, admitting that the Egyptian article is a necessity for diversified manufacture, and that its use is more helpful than otherwise to our cotton manufacturing interest. He goes further and affirms that the cultivation of long-stapled cotton in the South can be effected only under forced conditions, high natural or artificial richness of soil, and comprehensive husbandry, costing money and intelligence.

"If money and intelligence may be made useful in supplying domestic spindles with domestic fibre of the highest grade, we can command the situation, surely.

"Cotton-growers of India until recently believed they could not produce long-stapled cotton. Now, as a result of judicious experiment with Egyptian seed, they find they can, and purpose entering the field of competition."

## Gaffney's New Mill.

Considerable headway has been made by the Gaffney Manufacturing Co., Gaffney, S. C., in carrying out the plans for its new cotton mill. The plant will represent an investment of \$425,000. The contract for the building calls for a structure four stories high, 100x320 feet, for the mill proper, and a boiler and engine-room 100x150 feet, one and a-half stories high. The buildings are to be completed by August 10, 1895. It will have 25,000 spindles and 700 Draper looms, and will



employ about 300 operatives. The plans for the machinery and building provide for the latest and most approved ideas. It is expected to have the plant in operation within twelve months.

#### Exhibit of Foreign Cotton.

An interesting exhibit at the Waco (Texas) Cotton Palace will be the samples of foreign-grown cotton. Ellison & Co., of Liverpool, England, collected these samples and sent them to the exposition. The list, with values, is as follows: Brazil—Pernam, 4½d.; Brazil—Ceara, 4d.; Brazil—Paraiba, 3 15-16d.; Brazil—Rio Grande, 4½d.; Brazil—Maceio, 4d.; Brazil—Maranhão, 4 1-16d.; Peruvian—rough, 5½d.; Peruvian—smooth, 4 1-16d.; Peruvian—Sea Island, 8¼d.; Fiji—Sea Island, 3½d.; Tahiti, 8d.; Egyptian—Gallini, 8d.; Egyptian—brown, 5¼d.; Egyptian—white, 5d.; Smyrna, 3½d.; Cyprus, 3½d.; ginned Dharwar, 2½d.; East Indian—machine-ginned broach, 3 15-16d.; East Indian—Dholerah, 3d.; East Indian—machine-ginned Dholerah, 3½d.; East Indian—Oomrawuttee, 2½d.; East Indian—machine-ginned Oomrawuttee, 3d.; East Indian—Khandeish, 2½d.; East Indian—Seinde, 3d.; East Indian—Bengal, 2½d.; Madras—Timwilly, 3¼d.; Madras—Western, 3d.; Madras—Northern, 3½d.; Madras—Red Coconada, 3½d.; China, 3½d.; African, 3½d.

#### Recent Mill Construction.

A series of interesting articles describing modern methods of cotton-mill construction and engineering, published in an English textile paper, have been reproduced in book form, together with some additional matter on the same subject by the author, Mr. Joseph Nasmith, who has been an important contributor to the literature of cotton manufacturing. The book is published by John Heywood, Manchester, England. It is an instructive compilation of facts derived from actual practice, and although the book is an exposition of English methods, it gives space to American ideas of mill construction, as well as presenting the advantages of American mill machinery. The aim has been to make the book helpful to those in the cotton trade, and the contents have been put in a serviceable shape. Constructional details, slow-burning and one-storied buildings, cost, strength and fire-resistance of floors, fire appliances, lighting, heating, ventilation and humidity, calculation of machines in mill, recent examples of mills, steam boilers and boiler appliances, steam engines, turbines, gearing and shafting are among the subjects discussed by the different chapters. A large number of illustrations and twenty-six tables giving statistics of value are also contained in the book.

#### Award of Franklin Institute for Drawing Rolls.

The official seal has been put upon what is considered by cotton-mill men as one of the notable inventions in cotton-spinning since Arkwright's time, by the award of the Franklin Institute medal to Dunham & McKemie for their patent metallic drawing roll. The Institute's committee on science and the arts has made a searching investigation, both as to the originality of the invention and as to its practical value. The official report, as adopted by the Institute, says:

"The evidence collected in the course of this investigation, which is filed with the records of the case, is almost uniformly favorable, and indicates that the claims submitted in behalf of the invention are well founded. It may be summed up in the statement that in substantially every establishment where the invention has been sufficiently long in use to determine its value, the verdict is that the metallic draw-

ing rolls are yielding the most satisfactory results, giving increased production, superior yarn, less waste and at greatly reduced cost.

"From the foregoing fact and consideration the conclusion is reached that this invention has demonstrated in practical service its great utility to the cotton-manufacturing industry of the United States."

These rolls are in extensive use in a great number of cotton mills in this and other countries, being manufactured in the United States by the Metallic Drawing Roll Co., Indian Orchard, Mass.

#### Textile Notes.

THE Kanawha Woolen Mills, Charleston, W. Va., is behind in its orders and is working a full force of hands.

THE Virginia Cotton Mills, Huntersville, N. C., will put in an electric-light plant. J. E. Duval, of Charlotte, N. C., has the contract.

THE Catawba Mill, at Chester, S. C., is running on full time. The condition of the property has been improved by the superintendent, C. D. Skipper, and the mill is turning out a fine quality of yarn.

THE Riverside Cotton Mills, of Danville, Va., has decided to increase its capital stock \$300,000, making the total capital \$1,800,000. The new mill being built by this company was referred to in our last issue.

J. A. ABERNATHY, the purchaser of the Lincoln paper-mills property at Lincoln, N. C., has begun the erection of the building for his cotton mill. It will be a 5000-spindle mill for No. 50 yarn and above, two-ply.

D. R. REAVES, of Manning, S. C., a prominent farmer of that section, has been making some experiments in growing long-staple cotton. His efforts have met with considerable success, and a sample of his product, on being sent to Charleston, was valued, at the very least, at seventeen cents per pound.

THE Ada Mill at Charlotte, N. C., will be run day and night commencing about November 1. At the annual meeting of its stockholders the financial statement of the company for the fiscal year ended August 31 showed a surplus of \$27,974 after paying two dividends. M. C. Mayer was re-elected president, and John J. Gormley, secretary-treasurer.

A PLAN for a co-operative cotton factory at Carrollton, Ga., has been placed on foot by David Haas. It is contemplated to issue 100,000 shares of stock of \$1.00 per share. The company when organized will likely have the following officers: L. C. Mandeville, of Carrollton, president; W. D. Lovvorn, Bowdon, Ga., vice-president; J. P. Griffin, of Temple, Ga., treasurer, and Mr. Haas, secretary.

#### Car Works in Tennessee.

The Lenoir Car Co.'s plant, at Lenoir City, Tenn., one of the most thoroughly equipped in the country, has just been completed, and goes to work on good contract for cars at once. The capacity of the works is fifteen cars per day.

The Bass Car Wheel Works, also at Lenoir City, have been completed, and will begin to make castings within two weeks; capacity, 250 car-wheels daily, besides soft castings, for which the equipment is complete. This is claimed to be the most extensive plant of its kind in the South, and one of the best equipped in the United States. J. H. Bass, of Fort Wayne, Ind., is proprietor.

Rock Cut, Iredell county, N. C.—Kincaid & Bro.: "We think the outlook for the near future is good, and believe the coming year will bring forth many new manufacturing industries, especially in cotton manufacturing in this State."

## COTTONSEED OIL.

This department is open for the full and free discussion of trade topics and practical questions, and contributions are invited from men who are identified with this industry. Items of news are always acceptable.

#### The Markets for Cottonseed Products.

NEW YORK, October 16.

While there has been no further decline in prices of cotton oil at the South, our local market has again sold lower under the effect of local receivers' offerings and exceedingly languid response on the part of buyers for export and the home trade. At this moment prices are not very well defined, as, in their anxiety to sell, some parties have, during the past week, offered at lower prices than they were willing to sell when it was understood that buyers meant business. Just now our oil market is experiencing a spell of dullness such as we have had off and on for the past three months. Unfortunately, however, the demand is halting at a moment when the bulk of the crop is beginning to reach the markets. That the oil trade in general is not in an unsafe position is hardly doubted, and there is, on the contrary, a slow improvement taking place. This feature in the situation, however, will more likely be in evidence two months hence, when producers' necessities will be less pressing, than now. The weather at the South has been favorable for cotton-picking and the quality of the oil is improving. The following prices are for barreled oils on the spot: Prime crude, 26½ cents; off crude, 25 to 26 cents; prime summer yellow, 31 cents nominal; off summer yellow, 30 to 30½ cents; prime summer white, 35 cents; prime winter yellow, 37 cents; cottonseed soap stock, 1¼ cents; cottonseed meal, \$20.50 ex dock here; prime crude loose at mill, 20 to 22 cents. ELBERT & GARDNER.

#### Cottonseed-Oil Notes.

ABOUT 100 carloads of cottonseed from Mesquite, Dallas county, Texas, have been shipped during the season.

THE local cottonseed-oil mills at La Grange, Texas, are paying \$8.50 per ton for cottonseed, while buyers for non-resident mills are offering only \$7.00.

THE largest shipment of cottonseed which has left Alexandria, La., during this season consisted of fifteen carloads shipped by J. N. Hall to the Standard Oil Co., of New Orleans.

MR. J. B. WOOTEN, of Morrilton, Ark., has determined upon the erection of a cottonseed-oil mill in his city. A 20-ton plant is proposed, and bids on machinery are now being received.

THE Marlboro Oil Mill and Fertilizer Factory, near Bennettsville, S. C., is working day and night. A large oil tank has been erected, and the oil output is from 6000 to 9000 gallons per week.

THE Cotton Growers' Association, which met in Vicksburg on the 8th inst. and adopted its charter, have a suspicion that a combine is manipulating the price of cottonseed. It instructed its president, State Senator Kiger, to investigate the matter.

MR. T. R. CHENEY, of New York, president of the National Cotton Oil Co., was in Galveston on the 8th inst., and in company with Mr. John L. Kane, vice-president of the same company and resident in Galveston, will make a tour of North Texas. It is understood that the tour of inspection will include matters relating to the alleged cottonseed trust.

A MEETING of the stockholders of the Refuge Oil Mill Co. was held in Vicksburg on the 8th inst. Messrs. J. S. Richardson, W. P. Richardson, W. W. Gordon, A. S. Caldwell and P. M. Harding were elected directors. At a subsequent meeting of the directors Mr. P. M. Harding, the presi-

dent, and Mr. Durham, secretary and treasurer, were re-elected.

It is stated that the report of the American Cotton Oil Co. for the fiscal year ending August 31, 1894, to be submitted at the stockholders' annual meeting on November 1, 1894, will show that the company during the year paid off about \$150,000 of its bonds. It will also show that it has paid its interest charges, a 6 per cent. dividend on its preferred stock, and earned in addition a small surplus on its common stock.

THE cottonseed-oil market in Houston, Texas, on the 10th inst. was dull and listless. There is very little prime crude to be had, on account of inferior seed. Offerings were very free, some being as low as twenty cents, and even this price failed to tempt buyers. There are in Texas about ninety cottonseed mills, of which fourteen are designated as "trust" mills, and the season does not promise very flattering for any of them, unless an unexpected demand or reaction sets in.

A SPECIAL from Waco, Texas, says there is a feeling, pretty generally accepted among business men, that the State prosecutions organized against the Cottonseed Crushers' Association was disastrous to business, and many express the opinion that an inevitable result will be the absorption of the smaller mills by the wealthier corporations engaged in the manufacture of the products of cottonseed. In this connection Hon. Samuel R. Scott, judge of the District Court of the fifty-fourth judicial district of Texas, says: "The effort to make it appear that the enforcement of the trust law will have a tendency to drive the weaker cottonseed-oil mills out of the business is, in my opinion, advice to forestall public sentiment in favor of the cottonseed trust. In any case courts and court officers are compelled to see that the statutes are enforced."

#### Monazite in North Carolina.

The monazite beds in North Carolina are attracting considerable attention at present, owing to several large shipments of the material to the North for illuminating purposes. The Welsback Company, of New Jersey, uses the substance in the preparation of a filament, which, when heated to a certain temperature, gives out a very brilliant and steady light of great power. The filament in form is very similar to that in the ordinary incandescent electric lamp. The introduction of the Welsback burner has created a demand for the elements which are combined in monazite, which thus far has only been found in useful quantities in North Carolina and Georgia. In the gold gravels of Rutherford, Polk, Alexander, Burke, McDowell and Mecklenburg counties, North Carolina, it is found in small brown, greenish or yellowish-brown monoclinic crystals, associated with chromite, garnet, zircon, corundum, samarskite and other minerals.

Much of the substance is secured from the vicinity of Ellenboro, N. C. A correspondent of the MANUFACTURERS' RECORD who has examined the monazite deposits in that vicinity, writes as follows:

"Monazite is found mostly in the beds of small streams in the gravel. It seems to have accumulated from the washing of hillsides, and as it is heavier than ordinary sand, it settles down, while the sand washes off. It is mined about as surface gold with a trough and pan. Two hands in a good mine can get out from fifty to 100 pounds per day, which sell for six and a-quarter to six and a-half cents per pound if free from titanite iron ore. Separating the iron ore (titanite) from the monazite is the greatest trouble the miners have. About sixty-five tons were secured in August last."

Richmond, Va.—Chataigne Directory Co.: "Business is looking up in all lines."



## RAILROAD NEWS.

[A complete record of all new railroad building in the South will be found in the Construction Department, on page 188.]

## Hendersonville &amp; Brevard Railroad.

An important short line of railroad in Western North Carolina, on which work is to begin at once and to be completed within three months, is the Hendersonville & Brevard Railroad, to extend between the points named, a distance of about twenty-four miles. This road will run through the French Broad valley, an exceptional farming section, and the route possesses some of the most picturesque and beautiful scenery in Western North Carolina. It is intended to build a fine hotel at or near Brevard, which point is specially adapted to invalids with lung troubles, it being sheltered from the winds on all sides by mountains. Transylvania county has voted a subscription of \$60,000 to the railroad, and Hendersonville and Mill River townships \$10,000 each. Henry M. Warren & Co., of 115 Broadway, New York city, will carry out the project. The MANUFACTURERS' RECORD is informed that securities have been negotiated, that funds are in hand, that work of construction begins within ten days and the road will be completed by January 1. The line will be built to compare with any road in the South for the substantial character of construction. Sixty-pound steel rails, oak ties 6x7x8 inches, iron bridges, etc., will be used. Messrs. Warren & Co. will sublet part of the work.

## Mobile &amp; Ohio's Year.

The gross earnings of the Mobile & Ohio Railroad for the year ended June 30, 1894, were \$3,253,692, a decrease of \$104,778; the operating expenses and taxes were \$2,036,720, a decrease of \$222,469, and the net earnings were \$1,216,972, an increase of \$117,691. Of the decrease in gross earnings \$45,417 was due to the falling off in freight business and \$32,608 to the falling off in passenger business.

President Clarke says in his annual report: "The transportation of vegetables and tropical fruits through the port of Mobile continues to show satisfactory development; the revenue from this source increased during the year. The cotton crop, although not up to an average, was also better than the preceding year, revenue from this source having increased \$65,379.18. The revenue from all other freights decreased \$110,796.79, mainly accounted for by the loss in revenue from coal, resulting from the closing of Alabama and Illinois coal mines in April, 1894, by strikes, which continued until the close of the fiscal year; the shutting down of industries depending upon the mines for their fuel supply, and the general depression in business from which the country has suffered during the entire period covered by this report."

## B. &amp; O. Improvements.

Plans are under consideration for some important improvements to be made by the Baltimore & Ohio Railroad Co. The building of general railroad repair shops are in contemplation, and officials of the company have, it is understood, held a conference with Baldwin & Pennington, architects, of Baltimore, relative to plans for such shops. The location would be in the northern part of the city of Baltimore, adjacent to the recently-completed tunnel of the company. The company is also having plans prepared for a large roundhouse to be built at Cumberland, Md. Plans for large machine and repair shops at the same place are also said to be under consideration. The roundhouse will have a capacity for forty-two locomotives, and will be the largest single roundhouse on the company's line. The Baltimore &

Ohio acquired some time ago a tract of land on the outskirts of Cumberland, on which the new buildings are to be erected. The improvements to be made are in line with the determination of the company to remove the terminus of its second division from Keyser, W. Va., to Cumberland. The later city voted the railroad a bonus of \$150,000 for making the change. Since the acquirement of the Pittsburg & Western system by the Baltimore & Ohio, Cumberland is the natural stopping-point of three divisions of the road. It is the end of the second division going west, of the third division coming east and of the Pittsburg & Western. It is, therefore, considered a desirable place for centring business for interchange with these divisions, or for repairs and new work required on them.

## Creditable Enterprise.

Some substantial work is being done by the Mobile & Ohio Railroad in making known the capabilities of its territory. At the Illinois State Fair, held in Springfield, Ill., and the great fair of St. Louis, Mo., among the notable features were the agricultural and horticultural exhibits of this company. These exhibits were awarded first premiums at both places. Large crowds attended both fairs, and the products of Southern Alabama and Eastern Mississippi were displayed before just the class of men these sections want, and to whom profitable opportunities are offered. The practical steps taken by this railroad to present the attractions of this territory is calculated to result in some measurable benefit. The collection of these exhibits evidences creditable and effective enterprise on the part of the Mobile & Ohio Railroad Co. Nothing was raised for exhibition; simply the best of the different products that each party had raised and which happened to be on hand were secured. The whole collection was gathered in three days, with about three days' notice.

## A Transcontinental Flyer.

A fast train is to be put on between New Orleans, La., and San Francisco, Cal., that is to be a record-breaker. Arrangements have been concluded between the Southern Railway Co. and the Southern Pacific Railway by which the latter's Washington and Southwestern vestibuled limited train from New York, Philadelphia and Washington will make immediate connection at New Orleans with the "Sunset" limited of the Southern Pacific. This combination will shorten the time between New York and San Francisco from six to twelve hours, and between New Orleans and the Pacific coast more than twenty-four hours. The entire distance from New York to San Francisco, 3963 miles, will be covered in 117 hours. These transcontinental trains, besides being flyers, will possess all the elegance and comfort of the finest-equipped trains in the country. The "Sunset" limited will consist of four cars. The car next to the engine will be a composite car, containing a baggage apartment, barber shop, bathrooms, a cafe, a library and smoking parlor. The next two cars will be en section sleepers, with double drawing-rooms, with beautiful and elaborate decorations and upholstery. The last car will be a dining-car, elegantly fitted up with the latest conveniences. These cars, it is claimed, are the finest ever built at the Pullman shops, and were made expressly for the Southern Pacific at a cost of \$20,000 each. The whole train will be full vestibuled and lighted by Pintsch gas.

Considering the difficulties in the way of grades encountered, this train will be a famous one, and can be accepted as a high type of the advanced and progressive spirit which prevails in American railway management. It is also one of the steps towards improved train service which the

Southern Railway Co. is arranging for its lines. The arrangement for this service goes in effect on November 1.

## For a State Railroad.

The building of a railroad by convicts is the recommendation to be submitted to the Arkansas legislature by W. E. T. McConnell, superintendent of the penitentiary in that State. He suggests a road running west from Little Rock through Perryville and Booneville, and then on west until it taps the Frisco south of Fort Smith. This route, he says, would be the best that could be found, and it would open some of the very best territory in the State. It would pass through choice farm lands and through timber of fine quality and almost inexhaustible in supply, while it would tap the centre of the great coal basin of Western Arkansas.

## Locomotives for Brazil.

A shipment of twenty-five modern American locomotives will shortly be made to Brazil. They were built at the Brooks Locomotive Works, Dunkirk, N. Y., and are an installment of an order for sixty freight and passenger locomotives for the Central Railroad of Brazil. The locomotives in this shipment have fourteen wheels, the tenders being built solid with the engines, and their combined weight is about 170,000 pounds. They have cylinders with an 18-inch diameter and 24-inch stroke, and boilers of fifty-eight inches diameter. They are built for a five-foot three-inch gauge.

## Railroad Notes.

THE Atlantic & Danville Railroad Co. has awarded contracts for building five bridges to the American Bridge & Iron Co., of Roanoke, Va.

THE report of President C. F. Mayer, of the Valley Railroad of Virginia, submitted at the recent stockholders' meeting, shows an increase of about \$14,000 in net earnings over last year.

HERMANN COHEN & Co., the New York bankers, in their weekly circular say: "Southern railroads are doing best of any in the country. Southern stocks are equally likely to have a big rise in time."

THE Chesapeake, Ohio & Southwestern is improving its line between Louisville, Ky., and Memphis, Tenn. A large amount of gravel and rock ballast is being put down, and about fifty miles of 75-pound steel rails will be laid.

AT the stockholders' meeting of the Cincinnati Southern division of the Queen & Crescent system the Cincinnati, Hamilton & Dayton syndicate elected its entire ticket by a vote of 22,300 to 5001. The directors selected were: Henry F. Shoemaker, M. D. Woodford, Alfred Sully, E. Zimmerman, E. W. Kittridge, Alexander Macdonald, Lawrence Maxwell, Jr., S. M. Felton and C. C. Harvey.

ARRANGEMENTS are completed for the reorganization of the Kentucky Union Railway. A new corporation to be known as the Lexington & Eastern Railway Co. will be chartered with H. C. McDowell, of Lexington, Ky., president; James D. Livingston, of Lexington, Ky., vice-president and general manager; George Copeland, treasurer, and Arthur Carey, secretary. J. Kennedy Tod & Co., of New York city, carried out the reorganization.

CONTRACT has been awarded for the new Air Line passenger station and freight warehouse with terminal tracks at East St. Louis, Ill., to James Stewart & Co., of St. Louis, Mo. The buildings will cover a space 300x75 feet. The passenger station will be of red sandstone, with brick trimmings, two stories high, and a tower eighty-five feet in height. The building will be equipped with all modern sanitary arrangements, heating apparatus, etc.

## FINANCIAL NEWS.

## New Financial Institutions.

The Bank of Ellisville, Miss., opened its doors for business on the 8th inst. with J. S. Pettus, cashier.

The American Life & Accident Insurance Co., Limited, has been chartered at New Orleans, La., with William H. Riley, president; Frank A. Daniel's, vice-president, and C. A. Cook, secretary and treasurer. The capital stock is \$250,000.

The Fidelity Building & Loan Association has been chartered at New Orleans, La., by Augustus Craft, Henry H. Klein, D. J. Searcy and others. The capital stock authorized is \$5,000,000.

The German-American Building & Loan Association of Wheeling, W. Va., has been chartered with an authorized capital stock of \$5,000,000.

The Commonwealth Bank of Baltimore has been organized with James R. Wheeler, president, and George Yakel, vice-president. The capital stock is \$100,000.

## New Bond and Stock Issues.

The Pineville, Mt. Pleasant, Elkhorn & Big Stone Gap Railroad Co., Pineville Ky., will, it is stated, issue \$30,000 of bonds.

The San Antonio & Gulf Shore Railway Co., of San Antonio, Texas, has secured permission to issue \$360,000 of bonds.

The Frostburg (Md.) Gas & Electric Co. will issue \$8000 of 6 per cent. bonds.

Hamilton county, Tenn., will probably apply to the State legislature for authority to issue \$100,000 of 10-year 4½ per cent. bonds to fund its floating debt.

Quitman, Ga., has sold \$20,000 of electric-light and water-works bonds to the Travelers' Insurance Co., of Hartford, Conn., at par.

## Interest and Dividends.

A dividend of 10 per cent. has been declared by the Galveston Tinware Manufacturing Co., Galveston, Texas.

The Southern Soda Works, Nashville, Tenn., has declared a semi-annual dividend of 5 per cent.

## Financial Notes.

THE comprehensive article lately reproduced in these columns from the Financial Index, of Atlanta, Ga., on "Municipal Bonds" was written by Mr. F. M. Stafford, of Chattanooga, Tenn. In giving credit for the article, we inadvertently spelt the author's name wrong.

A STATEMENT of the condition of the Baltimore national banks at close of business on October 2 shows loans and discounts of \$32,841,844.22; overdrafts, \$17,697.57; United States bonds to secure circulation, \$1,645,000; national bank notes issued, \$1,480,500; capital stock paid in, \$13,243,260; surplus fund and undivided profits, \$5,832,208.51; average reserve held, 32.75 per cent.

"I TRAVEL constantly through Virginia, the Carolinas and Georgia," said P. B. Beard, of Salisbury, N. C., who represents a large Philadelphia wholesale firm, to a Washington Post reporter, "and I do not exaggerate when I say that those States are in a more prosperous condition than they have been at any time since the war. The farmers are getting out of debt and are raising their own supplies. Most of them have corn enough on hand to last two years. Despite the fact that the cotton planters have got a very low price for their product, what they did get was so much clear money. Our factories are running on full time, and some of them by night as well as day."

Horse Creek, Tenn.—Ivy Leaf Coal & Coke Co.: "The outlook in this section is, we think, better than for many months past in our line. Have our plant equipped and will employ about 350 to 400 hands."



## PHOSPHATES.

WITH this issue the MANUFACTURERS' RECORD begins the publication of a series of elaborate special articles upon European phosphates. In these articles the extent of developments in all European phosphate countries will be fully covered, with statistics of production, analyses, etc. These articles will prove invaluable to all who are in any way interested in phosphate matters.

## EUROPEAN PHOSPHATES.

## The First of a Series of Articles Covering Foreign Phosphate Interests.

[FOR MANUFACTURERS' RECORD.]

It is more than 100 years since the presence of phosphoric acid in various minerals was first recognized, analyses of apatite having been published as long ago as 1778 by Dr. Klaproth. Early in this century (1820) Monsieur Berthier made an analysis of some nodules discovered by Monsieur de Bonnard in the neighborhood of Havre, France, and found them to be phosphatic. In the year 1840 Dr. Justus von Liebig, of Germany, suggested the admixture of sulphuric acid to crushed bones, in order to render soluble the phosphate they were known to contain. This element had hitherto been considered insoluble and useless, the gelatine matter having been regarded as the sole fertilizing element. In fact, it was only in 1843 that this illusion was dispelled by the experiments made by the Duke of Richmond, which showed that bones, deprived of their grease and gelatinous matter, were equally as efficacious as fresh bones.

The first to profit by Dr. Liebig's suggestions was Mr. I. B. Lawes (now Sir I. B. Lawes), who put them to practical effect at Deptford, London, and so became the pioneer in the manufacture of chemical fertilizers. Meanwhile, a patent had been taken out in France for the application of phosphates for agricultural purposes by mixing them with bones and other material, and experiments were being made in England as to the effects of direct application of phosphates to the soil. With this possible use in view, Dr. Danberry and Captain Widdrington paid a visit in 1843 to Estramadura, Spain, in order to decide whether the crystalline deposits of apatite described by Monsieur Le Play in 1834 could be economically worked and the output shipped to England. Two years later (1845) Professor Henslow recommended the English coprolites as a suitable substitute for bones for dissolving purposes. These nodules (wrongly named "coprolites," as Professor Henslow himself admitted at a later period when he found that their origin was not coprolitic,) occur in beds in various parts of the counties of Suffolk, Cambridge and Bedford, and had been fully described many years earlier by various scientists whose interest was centred in the numerous fossils contained therein. Mining operations commenced without delay, and, owing to the strong advocacy of Messrs. Paine and Way and their numerous practical experiments, developed rapidly.

The next country to produce phosphate was Norway, from the apatite deposits at Krageroe discovered in 1854. It is reported that during the first five years 13,000 tons were exported from this neighborhood, but that rate of production was not maintained, as the quantities raised from 1871-75 averaged only 800 tons per annum. The Oedegarden deposits then began to be worked, and the average for the next five years increased to 3500 tons per annum, followed by an annual output of 8500 tons from 1881-85. The maximum was reached in 1890, when 11,119 tons were produced, but since then the output

has dwindled down to very insignificant figures, owing to the general fall in prices.

Spain entered the arena in 1855, but workings were only desultory until the Caceres mines were opened in 1860. During the following sixteen years 124,000 tons are said to have been exported, most of it being shipped to the United Kingdom. From 1876 to 1884 the Caceres Company raised 360,000 tons, and shipments to England for the years 1881, 1882 and 1883 were 44,321, 55,674 and 48,943 tons, respectively. From that date the industry declined rapidly, and of late years only a few hundred tons have been exported.

Following closely on Spain, France began to produce phosphate in 1856 from the Ardennes deposits, the nodules being ground and applied direct to the soil. The same formation continues in the Meuse department, and this deposit has yielded more phosphate than any other individual deposit in Europe. In 1875 the production of Ardennes and Meuse phosphate had reached 66,000 tons; in 1886 it was 76,650, and in 1889 67,000 tons. In 1870 the Bordeaux phosphates, found in the departments of Lot, Tarn et Garonne and Aveyron, began to be worked on an extensive scale, and large quantities were shipped to England for about ten years, after which the richer qualities become scarce and competition was too strong from other quarters. The Boulogne coprolites came on the market in 1873, and were shipped to England in considerable quantities until 1883, when competition from Belgium restricted their consumption to domestic outlets. The next important phosphate discovery in France was that of the Somme deposits, which began to be worked in 1886, and which gave France the control of the phosphate market until Florida wrested it away in 1891.

Germany became a phosphate producer about 1866, and for many years the higher grades of Lahn phosphate were shipped to England, and even to the United States. The largest production was made in the years 1883, 1884 and 1885, when 47,000, 53,000 and 41,000 tons were raised. After these years the whole production was manufactured locally, as the high percentage of iron and alumina and the gradually dwindling prices prevented foreign sales. In 1892 production decreased to 15,000 tons.

The Mons deposits, in Belgium, began to produce in 1877. After the first four years the production increased rapidly, owing to the demand from France and England, and in 1885 over 160,000 tons were raised. In 1889 the Liege deposits began to be exploited, and in the following year 100,000 tons were added from this new source.

The enormous phosphate deposits of Russia have been worked almost exclusively for local consumption, although a few hundred tons have been shipped to other countries.

It will be seen from the above that it is only since about the year 1870, at which date the immense guano deposits were practically exhausted, that the phosphate-mining industry in Europe assumed regular and increasing proportions. The total production in 1870 was considerably under 100,000 tons; ten years later it was about 250,000 tons, while by 1890 it had risen to over 800,000 tons, in addition to which about 600,000 tons of basic slag were being used annually.

It is worthy of notice that the United Kingdom has imported phosphates from every source of supply in Europe and elsewhere where phosphate has been produced. In the last ten years over 2,500,000 tons of phosphate have been landed on her shores, but large quantities in the shape of superphosphates have been re-shipped to various countries.

Before concluding this epitome of the industry, it may be of interest to give an

outline of the total quantities of phosphate produced by the various countries in Europe.

France heads the list a long way in advance of any of the other countries. It has not been possible to ascertain the exact figures except for Belgium, Germany and Norway, but the following estimate is based upon a very careful calculation made from reliable data:

	Tons.
France.....	5,750,000
Belgium.....	2,200,000
England.....	1,800,000
Germany.....	850,000
Spain.....	600,000
Norway.....	125,000

Russia is omitted, as no reliable data have been received.

The total production from South Carolina to date slightly exceeds 7,250,000 tons, and Florida has already mined over 1,000,000 tons.

Various West Indian islands, notably Curacao, Aruba and Sombrero, have supplied large quantities of phosphate, and total shipments to date have exceeded 1,000,000 tons, nearly the whole of which have been shipped to Europe. Canada has produced about 250,000 tons, just double the output from Norway, but in like manner the output has fallen to a mere cipher.

In reviewing the past, it will be noticed that in the sixties Spain was the most important factor in the European market, but ceded her position to France in the seventies, when the Bordeaux and Boulogne deposits came to the front. The Somme discoveries were made at a time when Belgium looked like assuming the lead, and gave to France a most predominant influence, which has now been transferred to the shores of Florida, whence last year close upon 400,000 tons were shipped to various parts of Europe and the United States.

C. C. HOVER MILLAR.

## Phosphate Markets.

OFFICE MANUFACTURERS' RECORD, BALTIMORE, October 18.

In the phosphate market during the week there has been a fair demand from out-of-town buyers and local dealers. There is, however, only a light movement, as the season is now nearly over for heavy purchases. The reports from points of production are very favorable, both in South Carolina and Florida. Large sales have been made this month to foreign buyers at \$5.00 to \$5.25 f. o. b. Tampa, and there is a good demand for product far into 1895. The market is very steady. South Carolina rock is quoted \$3.75 to \$4.00 for crude, \$4.25 to \$4.50 for hot-air-dried and \$6.50 for ground rock, all f. o. b. Charleston. Florida rock is quoted at \$4.50 to \$4.75 for river pebble, and \$4.75 to \$5.00 for land pebble f. o. b. Tampa or Punta Gorda. The charter business in New York during the week has been fairly active. Berth freights remain dull and irregular. A British steamer, 1391 tons, was taken from Brunswick, Ga., to the United Kingdom or Continent with phosphate, 16/; a schooner from Nevada to Cartaret, N. J., with phosphate, \$2.00, and a schooner, 317 tons, from Tampa to Mobile with phosphate rock, \$1.37½.

## FERTILIZER INGREDIENTS.

The market is generally very quiet, without any special feature of interest. There is a little more inquiry in some lines, and the current trade indicates a better volume of business in the near future. Ammoniates are steady and held at previous figures. Nitrate of soda is easier in tone, but not quotably lower. Fish scrap and bone meal are steady at full prices.

The following table represents the prices current at this date:

Sulphate of ammonia, gas.....	—@ \$3 50
Sulphate of ammonia, bone.....	3 30@ 3 35
Nitrate of soda.....	2 25@ 2 30
Hoof meal.....	2 35@
Blood.....	2 50@
Azotine (beef).....	2 40@ 2 50
Azotine (pork).....	2 50@
Tankage (concentrated).....	2 25@ 2 30
Tankage (9 and 30).....	2 25@ 10

Tankage (7 and 30).....	20 00@ 22 00
Fish (dry).....	24 50@
Fish (acid).....	15 00@

CHARLESTON, S. C., October 15.

The past week has improved the phosphate market here considerably. Shipments are active again, and inquiries are more numerous from both coastwise and foreign. While prices have not advanced to any extent, yet the market is much firmer at current quotations, and a decidedly more satisfactory feeling pervades among the producers. All of the river companies are shipping heavily to foreign points, and are progressing well with their mining, especially the Carolina Mining Co., which has only within the last two weeks put its dredge Kennedy back in State waters. This well-equipped dredge is reported as doing more work than usual. The manufacture of fertilizer stock continues heavy and the outlook promises well. Prices are about \$3.75 to \$4.00 for crude, \$4.50 for hot-air-dried and \$6.50 for ground rock, all f. o. b. Charleston. The coastwise shipments were: David Baird, 900 tons, for Baltimore; A. L. Mulford, 750 tons, for Philadelphia; E. C. Middleton, 700 tons, for Baltimore; A. C. Grace, 700 tons, for Philadelphia; while in port and loading are Addie D. Bacon, Fannie Brown, E. G. Hight, M. J. Lawrence, S. B. Marts and Vanlear Black. The shipments by water since September 1 were 6273 tons, against 10,700 tons for same date last year.

## Phosphate and Fertilizer Notes.

MR. B. ARENTZ, a phosphate broker of Ocala, Fla., in his suit against the Chicago Phosphate Co., was awarded a verdict on the 12th inst. of \$2200.

THE British steamship Feliciano, from Port Tampa, Fla., with 300 tons of phosphate, arrived at Tybee on the 12th inst. and was ordered to Helmsborg, Sweden.

THE steamship North Gwalia sailed from Brunswick, Ga., for St. Petersburg and Dantzic on the 12th inst., having among her cargo 2150 tons of phosphate from the Brunswick Terminal Co.

AT Spartanburg, S. C., a \$100,000 fertilizer factory is said to be the latest enterprise projected. It is proposed to start work at once, as two-fifths of the stock has been subscribed.

MACHINERY was received on Saturday last at the phosphate mines at Castle Hayne, near Wilmington, N. C., which will double the product and enable the company to ship 100 tons per day.

A LARGE additional force of men will soon go to work on the Norfolk & Carolina Chemical Works, in course of construction at Pinners Point, near Norfolk, in order to try and get the plant in operation by the spring.

THE Bone Valley Phosphate Co., of Florida, is having a new dredge-boat and several barges built, and will soon be better prepared than ever to get out the pebble. The company is determined to make a good record in the future mining of phosphate.

THE phosphate shipments at Fernandina were light for September, being only 9126 tons. The total shipments for the nine months ending September 30 aggregate 123,311 tons. The estimated shipments for October are 9000 tons. The charters for this month's loading are as follows: Cie des Phosphates de France, steamship Carile; B. Arentz & Co., Dunnellon Phosphate Co. and Anglo-Continental Guano Works have each chartered a steamship not named. The latter company have also chartered the steamship Boston City.

Mobile, Ala.—Frank E. Overall: "Business is gradually looking up in this section, all merchants reporting increase in trade. A grain elevator is in contemplation, and a cold-storage company is about to begin erecting its property."



## MECHANICAL.

## Power Door and Blind Clamp

We illustrate herewith what is said to be the heaviest door and blind clamp ever built. This machine weighs 3200 pounds, and its capacity is believed to be limited only by the ability of the operator to handle the work. It is the product of Rowley & Hermance, of Williamsport, Pa. This firm explains that it was induced to bring out this machine, said to be the first and only power-driven single-motion door and blind clamp placed on the market, by the want of a clamping machine that would open wide enough to allow for the insertion of dowels for blind "tenon" work, and by the constantly growing demand for a door and blind clamp to be operated by power.

This machine is driven by powerful friction gearing which operates a heavy connecting rod. This rod is attached to the slides. By this arrangement the greatest pressure is applied when the joint is nearly closed or where the resistance must be overcome. At this point the connecting rod falls slightly below the centre line and holds the clamp closed until the door is wedged. The door is released by a slight pressure of the foot upon the lever, shown near the floor in front of the machine, which reverses the friction and opens the clamp.

In moving the back plate in either direction, as soon as the plate reaches the limit for which it is set the crank strikes an adjustable screw, which instantly releases the friction and stops the motion. Another slight pressure of the foot upon the other end of the same lever starts the plate forward when another door is to be clamped.

The movable plate will open from one inch to seven inches wide.

The change from one size to another is quickly and easily made by moving the back plate forward or backward with hand-wheels fastened to screws that run through the width of the machine.

This machine, it is claimed, will clamp more doors and blinds in a given time and do better work than any other machine made. An equal pressure is given on each side of the tenon of each rail, or increased pressure can be exerted on the wide bottom rail when desired. The ends are clamped by the end bar provided for that purpose.

from the Rockwell Manufacturing Co., of Milwaukee, Wis. It is as follows:

"Regarding the power door clamp, we are more than pleased with it. We have

heavy clamps actively employed. Now they do not seem to be required, the power clamp doing most of the work. We think the machine a very desirable one to have,

power. Work of this character was done on a machine with a tilting table, and the heavy work had to be moved and held in position. The next step was a machine



NO. 8 SHIP-TIMBER BAND SAW.

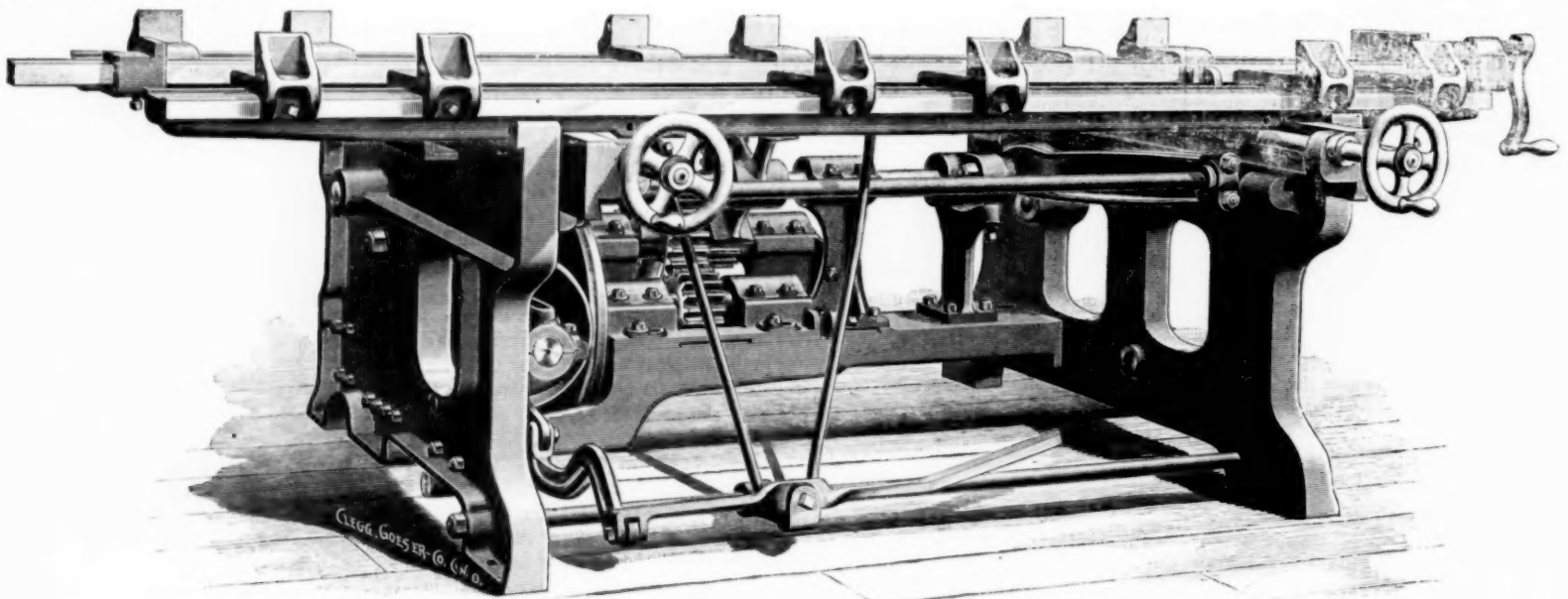


FIG. 1.—POWER DOOR AND BLIND CLAMP.

It will clamp any size up to four feet wide by eight feet long in one motion, or twice its length in two motions.

It is constructed entirely of iron, planed perfectly true, and designed for rapid and accurate work. The driving pulley is 16x8, and should run 125 to 150 revolutions per minute.

The ability of this machine is indicated by a letter received by the manufacturers

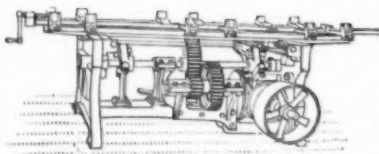


FIG. 2.—REAR VIEW.

clamped nine doors in five minutes. Before placing it in use we had three of your

and a great labor-saver."

The manufacturers will furnish any further information regarding this machine on application.

## No. 8 Ship-Timber Band Saw.

On this page is shown a band saw whose principle is said to be entirely new, being especially designed for the sawing of angles on ship timbers and operated by

with only the top wheel to angle or 'all away from a straight line. In this case the upper wheel carried the saw blade with it and it is said made it equally as difficult to operate or cut to a line.

The new improved machine is made with both wheels to move on a radius, the centre of the radius being the top of the table. The column is one solid casting cored out, planed true, of large propor-



tions and of sufficient floor space to insure steady running at any angle at which the saw blade may be. The radial slide works in planed ways with bearing boxes attached of extra length. The mandrels are of large diameter, running in self-oiling boxes. This mechanism is arranged to bevel by power or by hand. An index plate is within sight of the operator to give the desired angle of cut. The movement can be reversed instantly, being under the control of the operator at all times. Timbers can be cut from a straight line to an angle of forty-five degrees. This machine also does the work of the ordinary band saw.

The tension on the saw blade is obtained by an ingenious device and can be varied at will and is sensitive under all conditions, thereby prolonging the life of the saw. The machine is provided with the Egan

raises and lowers so as to take in twenty-four inches between the top roller guide and the table. The makers furnish with this machine one two-inch saw, and the machine weighs 5600 pounds.

According to the practice of the makers a shop number is attached to each machine sent out and each casting has its own number, so that when supplies are wanted a mention of these numbers should be made. The Egan Co., 228 to 248 West Front street, Cincinnati, Ohio, is introducing this machine.

#### Heavy Band Resawing Machine.

On this page is illustrated the Atlantic Works B three-band resawing machine, a very heavy and compact machine, designed for the use of cabinet-makers, coach builders, sash and door mills, and

The machine will take the lumber up to twenty-two inches wide and six inches thick, and has three changes of feed. Saws can be used up to three and a-half inches wide and from eighteen to twenty-two gage, taking a saw kerf of one-sixteenth of an inch or less. The details furnished are one plain table, gage for ripping, one saw each three inches wide and three-quarter inch wide, twenty-three and a-half feet long, scarfing frame, one pair of tongs, belt shifter and full set of forged steel wrenches. The tight and loose pulleys

moving a small lever above the keyholes at the front of the clock either in or out. This lever shifts the record ribbon through which the registration is made.

The recorder referred to above will register 100 employees; however, by using a number of recorders, which is generally preferable in large establishments, as many as 1000 can register, the numbers coming consecutively. As many as three or four employees can register at the same time. The best eight-day movement made by the Seth Thomas Clock Co. is used in this re-

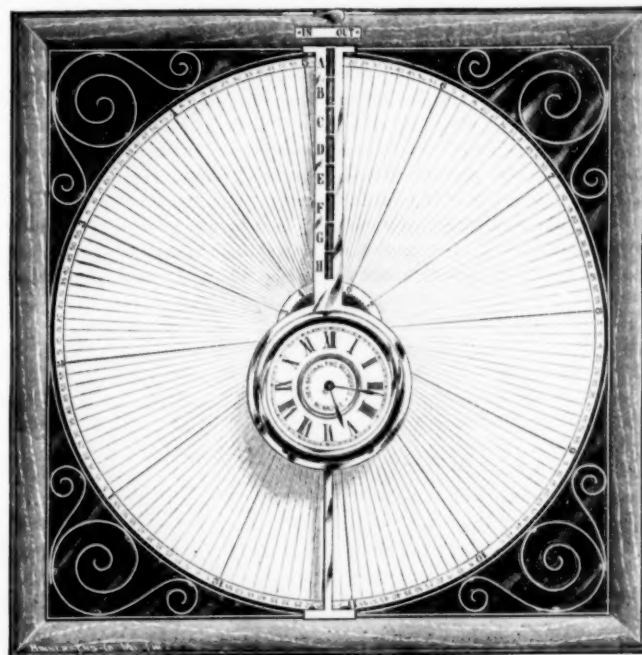


FIG. 1.

are twenty inches diameter, 5½-inch face, and should make 550 revolutions per minute.

The manufacturer of this machine is the Berry & Orton Co., of Philadelphia, Pa., who will give any further information desired.

#### A Simple Time Recorder.

The New National Time Recorder Co., of Milwaukee, Wis., has put on the market, in addition to the "Bolte automatic" and autographic recorders' its latest style recorder, which the firm has called "The American." It occupies a space twenty-three inches square and four inches deep.

Within fifteen minutes after the registrations have been made they come into full view, as the drum or cylinder revolves around, and remain in plain sight for about five and one-half hours. Should the proprietor upon his arrival wish to see just how many and who of his employees are absent or were late, all he need do is to look at the record sheet on the drum any time between 7.30 A. M. and noon, or 1.30 and 6.00 P. M., and he can see at a glance all that he desires to know. This recorder furnishes a record sheet of the original registrations, which can be taken off daily and filed away without requiring the ser-

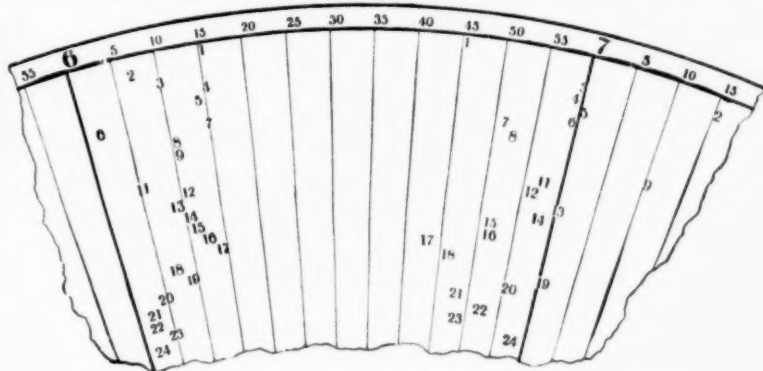


FIG. 2.

Cut No. 1 shows the complete recorder, which will take a 21-inch record dial. Cut No. 2 shows a portion of the record dial after a day's registrations have been made. The heavy lines are hour lines and the lighter ones five-minute lines. Thus it may be seen at a glance anytime during the day by the employer or anyone interested that No. 2 is fifteen minutes late, No. 9 ten minutes late and No. 10 is absent, not being registered.

By a novel arrangement the numbers come consecutively on the record dial, and the key or check (Fig. 3) will enter only the hole for which it is intended. A slight pressure on the key will ring the bell and indicate that a registration has been made. The arrival of employees is indicated by the numbers appearing in red and the departure in blue. This is accomplished by

vices of an employee to recapitulate or tabulate the same. The special claims made for this device are rapidity of registration; no complicated mechanism to get out of order; all the registrations, as well as the

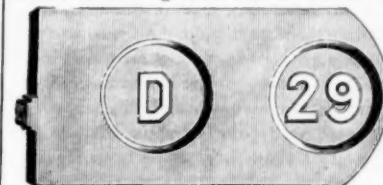
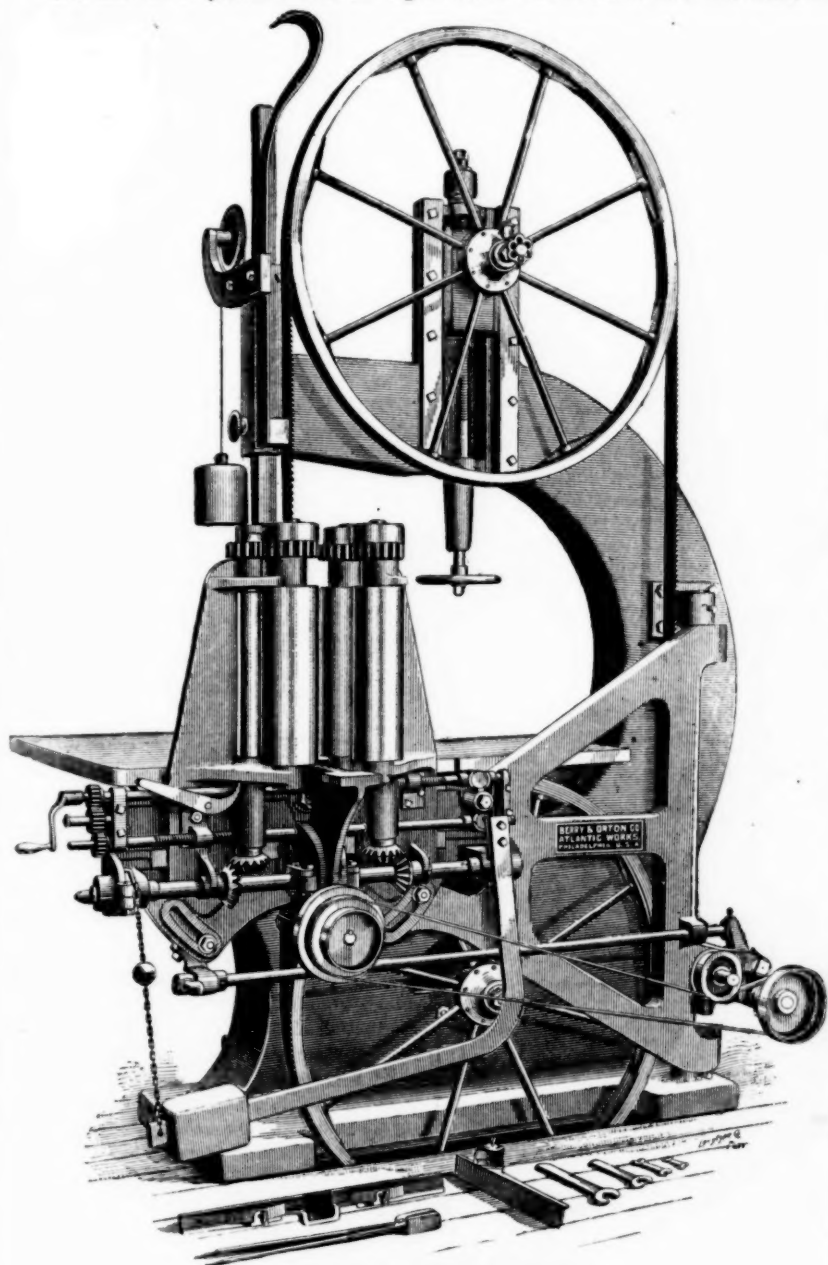


FIG. 3.

blanks left by the absentees, can be seen at a glance any time during the day; another feature is its comparative cheapness when the service it renders is considered. Such a recorder, whether in factory, store, workshop, office or bank, is calculated to be bene-



HEAVY BAND RESAWING MACHINE.

patent roller guides, one above and one below the table, which assist in making a perfect running blade at all times.

The device for tilting the upper wheel is something new and can be operated while the machine is under speed. The table is of iron, smooth on its face and made stationary, so that it is always level. Friction rollers are connected to the under side of the table which project above the level and close to the saw blade, thereby reducing the friction of the timbers on the table to a minimum.

Suitable arrangement is provided for driving the machine at its fullest capacity and at any angle within forty-five degrees. The wheels are forty-eight inches in diameter, three and one-quarter inches wide, with steel spokes and fitted to the shafts in a very superior manner, being turned true and perfectly balanced. The guide post

all work where the requirements are for both resawing and hand or scroll work of a large scope. The framing is massive and strong enough to stand the strain of saws up to three and a-half inches wide.

The wheels are forty-four inches diameter, three-inch face, made of wrought iron, covered with bent wood, canvas and gutta-percha, making them strong, light and elastic; or, where preferred, when the machine is used for resawing only, iron or steel-face wheels will be substituted.

The feed works are strong, easily adjusted and always ready. They are either self-centring, or one side can be made rigid by loosening one belt and tightening another. They will tip for sawing bevel siding, or can be swung out of the way in one minute when the machine is needed for plain or scroll work.



ficial in its effect to employers as well as to employees; the employer is assured of a perfectly reliable record and the employee is assured of absolute justice. The manufacturer places these recorders in all places subject to approval, and if not satisfactory after thirty days' test they can be returned at the company's expense.

#### The "Triumph" Dynamo.

In placing on the market the "Triumph" ironclad dynamo, a cut of which is shown on this page, the manufacturer recognizes a large and legitimate demand for distinctively low-priced dynamos that will do good work. To turn out a machine of excellent design and workmanship that could be sold at a low price was found to be possible under certain conditions, which the Triumph Electric Co. states to be as follows: The design must cover every possible economy of construction; the number of sizes must be limited; the product must be large, and the price can be and must be low and strictly uniform and invariable.

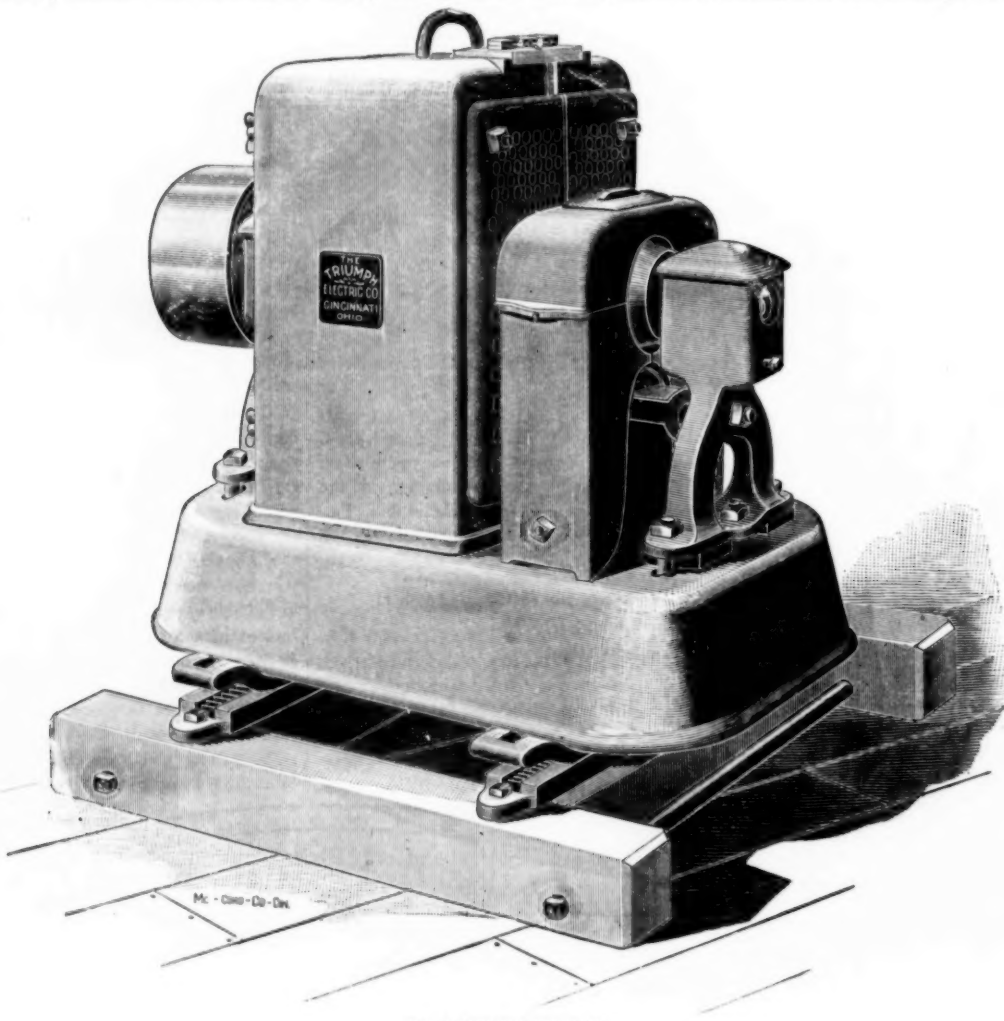
it on. The shaft is first prepared by having three longitudinal grooves cut equidistant apart, somewhat shorter than the hub of the spider, into which the metal flows in casting, and shrinks, holding it firmly against lateral or endwise movement. The spider is of bronze metal. The armature-core is built up of thin discs of soft charcoal iron. These discs are toothed on their outer circumference to receive the wire. The conductors are thus imbedded in the iron, and protected thereby, and are in such close proximity to the iron pole pieces as to leave air space sufficient only for clearance in rotation.

The building up of the armature-core of thin discs is for a purpose, and that purpose is to break up the "eddy" or "foucault" currents that tend to circulate through and around in any moving mass of iron under magnetic influence, causing heat and consuming power. To laminate an armature-core, and then mill or cut grooves in it with a tool, it is stated, is to destroy the good effect intended, since the

When the winding is completed the coil and form is placed in a steam-heated oven, and kept there until the last particle of moisture is driven out. The coil is then removed from the form, and after a first covering of heavy fuller-board, is carefully wound with three layers of covering tape, each layer coated with shellac, and again put in the oven and baked until thoroughly hard and dry. Constructed in this way, and so placed on the poles that no part is in contact with the iron, a burn-out is claimed to be impossible.

Each machine is tested before it leaves the factory, and the brushes set in a fixed position, which remains permanently the same for all loads, and for rotation in either direction. The carbon brushes are fed end-on by a flat spring of practically uniform pressure for the full length of the carbons, and, it is stated, require no attention whatever. The point of commutation, it is said, cannot change.

The journals are of generous dimensions, resting in bronze bearings. They are self-



THE TRIUMPH DYNAMO.

In the manufacture of this dynamo every point of mere beauty that would increase the cost has been omitted, and the selling expenses have been reduced to a minimum. The designers and builders of this dynamo have brought into use their ten years of practical experience in the successful designing and building of electric-lighting and power machinery in perfecting the "Triumph" machines.

The company's factory is equipped with modern machinery especially adapted for making these particular dynamos, and the following details regarding them will be of interest: Owing to the importance of the armature of a dynamo and the success of the machine depending upon whether it is correctly designed and properly made, careful attention has been bestowed upon the armature of this machine.

Beginning with the shaft, which is made of the highest grade of machinery steel, we depart, the company says, from conventional methods, and instead of turning the best part of the steel away to fit the spider, we make the spider fit the shaft by casting

metal of one disc is dragged into contact with the metal of the next, thus forming an easy path for the troublesome currents to flow through. The discs used in these armatures are slotted by a machine designed for that special purpose, one at a time, so that when placed on the spider no filing or cutting is necessary to complete them. The result is claimed to be perfect laminations, cool running and high efficiency. Mica insulation is used inside and out. The method of winding is simple, the connecting wires being brought straight out to the commutator without crossing or leads.

The commutators are built of best tempered copper, and insulated with sheet mica. They are securely keyed to the shaft, and are of ample proportions. The dust and damp-proof cover may be removed and the commutator operated in the usual way if preferred.

The field coils are of simple construction. They are wound on a rectangular form of cast iron, each layer being saturated with a special insulating compound,

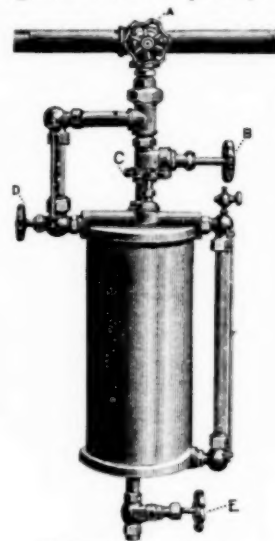
aligning and self-oiling, with carrier rings, two on each bearing. The oil wells are of ample capacity, holding enough oil for one month's run without changing. The cap of pedestal lifts off, exposing the entire bearing for inspection. The armatures are protected at each end by perforated metal plates, and all moving parts are covered.

Any queries on points which are not covered by the above description should be addressed to the manufacturer, the Triumph Electric Co., Cincinnati, Ohio, which will supply all information desired on application.

#### Kerosene-Oil Feeder.

For many years steam-users have been familiar with the fact that kerosene oil is a valuable solvent for use in steam boilers. The difficulty has been to use it so as to get the best possible results. To put it in the boilers in quantities at such times as they are washed out, or even to pump it in occasionally, was found, it is said, to be of but little avail, for the reason that the oil is very light and evaporates quickly,

passing off with the steam, and thus losing the effects. To handle this oil effectively for this purpose it should be, it is stated, fed in with the water constantly, and to properly accomplish this the Erie kerosene-oil feeder was designed. It has, as shown in the illustration, a glass gage on the side showing at all times the quantity of oil in



KEROSENE OIL FEEDER.

the tank, and a second glass showing the sight drop feed, which, with valve D, can be regulated to feed from one to 100 drops per minute. The feeder can easily be attached to the feed line, it having but one (3/4-inch) connection. It is made by the Sims Company, of Erie, Pa., who supply a suitable tee for the feed-pipe.

#### Improved Piston Packing.

The improved spiral piston packing illustrated herewith was lately placed on the market by the Boston Belting Co., of Boston, Mass. It is known as the "Imperial," and is made in the form of a continuous ring shaped to the rod and box. This method avoids, it is stated, the trouble of

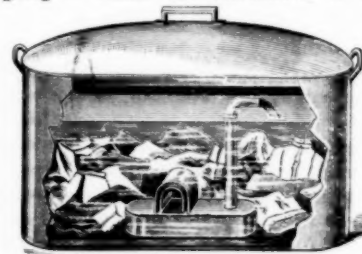


IMPROVED PISTON PACKING.

bending to fit its place. This new packing is furnished in sizes from one-eighth of an inch up to two inches square, each piece being coiled in a box made especially for it. About twelve feet of packing is contained in each box, and only full boxes are furnished consumers. Prices and discounts can be had by addressing the company as above.

#### Clothes Washer.

A novel apparatus for washing clothes is that being introduced by the Bolgiano Manufacturing Co., 415 Water street, Baltimore. We present an illustration of the machine herewith. Any device that is going to lessen the discomforts of the



CLOTHES WASHER.

weekly wash-day will be a welcome addition to every household. This machine aims to perform this service, and some special claims are made for its advantages. It is simple in form, and the price is only nominal. The work of the device is done automatically, and no particular attention is required.



The demand for the best grades of manufactured lumber is of better volume, and the whole market for lumber of all kinds



expected. At the saw-mill sections along the several lines of railroad there is active work in progress and mills are fairly well supplied with orders, while prices are said to be a shade firmer. The clearances during the week were as follows: Spanish bark F. G. for Valencia with 399,000 feet of lumber from Rosendo Torres; schooner Thelma for Boston with 450,000 feet of lumber from Stilwell, Millin & Co. The Hilton-Dodge Lumber Co. cleared the following vessels: German bark Rhea for Llanelly, England, with 301,000 feet; schooner Phineas W. Sprague for Boston with 550,000 feet cypress lumber; Anna R. Bishop with 339,000 feet for New York. The Hilton-Dodge Lumber Co. are loading schooners Ann L. Lockwood and Cassie Jamison for New York. The charters reported in New York last week were as follows: A schooner from Brunswick to Philadelphia with lumber, \$4.25 and free wharfage; a schooner from Brunswick to New York, \$4.60, and a Norwegian bark (to arrive) from Brunswick to Rio Janeiro at \$14.00.

#### Beaumont.

[From our own Correspondent.]

BEAUMONT, TEXAS, October 15.

The general features of the lumber market in this section of the State have not changed during the past week, and the demand is fairly active, with prices generally easy. While there is no great pressure of orders, the volume of transactions continues about the same, and as long as sellers are disposed to make great concessions in order to do business, values will not improve. There are a number of good-sized timber hills to hand, and more offering, while for this class of material values are considerably firmer. The shingle trade keeps up fairly well, but stocks are light and the demand is moderate. There is considerable demand at Orange for railroad ties and stringers, and, with the railroad material going out, the mills are able to put in full time. The shipments of flooring and finishing stuff to Houston and railroad ties to Philadelphia, with considerable trade to western gulf ports, brings the volume of business for the week up to the best this year. The five lumber and two shingle mills at Orange are all running on full time, and are well stocked with lumber. The directors of the Long Manufacturing Co. held a meeting on the 9th inst. Mr. W. A. Fletcher tendered his resignation as president, and Mr. John L. Keith was chosen to succeed him. Mr. S. A. Long was elected vice-president, and Mr. H. D. Keith, secretary and treasurer. The new officials contemplate making extensive changes, repairs and additions to the mill's equipment. Among the improvements will be the placing of a band saw, to facilitate the manufacture of shingles. The Brown Lumber Co., of Grant, Marion county, with principal office at Taylor, was chartered last week with a capital stock of \$20,000. The incorporators are Hugh Williams and W. J. Williams, of Williamson county, and G. W. Brown, of Marion county. Operations have been resumed on the different lines of logging railways, which is a good indication of improvement in the lumber business. The Cow Creek tram, the Sabine tram of the Sabine river and the trams of the Beaumont Lumber Co., Texas Tram & Lumber Co. and Gulf, Beaumont & Kansas City Railway on the Neches have all resumed operations.

#### St. Louis.

[From our own Correspondent.]

ST. LOUIS, MO., October 15.

The situation at present in local lumber circles, while not wholly satisfactory, may be considered fairly encouraging at the moment. The volume of transactions are not quite as large as those of September, but there is a fairly active demand, with values generally hardening. The new

price-list adopted two weeks ago, which made slight advances, was issued to the trade last week, and is generally received with favor by retailers. Hardwood orders firm, the manufacturers throughout the country are showing up much better, and sales to implement manufacturers and others are of quite a large volume. There is a growing demand for quartered red oak, and prices are a shade firmer. The white-pine trade is of fair proportions, but prices continue exceedingly low. The September business was not bad, compared with the same month last year. The receipts by rail were 3842 cars, against 3439 cars last year. The receipts from the lower rivers show a gain of 1,500,000 feet. Shipments for the month were 2433 cars, against 2375 cars in 1893. Lumber dealers say that the new tariff bill will have very little effect upon the trade in this market, due to the fact that this is chiefly a hardwood and yellow-pine headquarters. Rafts from the upper river have been coming in freely during the past two weeks, on account of the approaching end of the rafting season.

#### Southern Lumber Notes.

J. W. SMITH, of Athens, Ga., desires to correspond with parties wanting shuttle and bobbin timber or blocks.

THE loss of the Kimball Lumber Co. at Apalachicola, Fla., by the severe storm last week is estimated at \$10,000.

THE schooner Isabella Gill was loading lumber at Brunswick, Ga., on the 10th inst. for Boston from the Altamaha Cypress Mills.

THE firm of Mills & Lambert, of Glade, Miss., has been dissolved, W. W. Lambert retiring. J. H. Mills will continue the business.

AMONG the buildings destroyed at Biloxi, Miss., last week was the planing mill of John R. Harkness & Son, valued at \$3000, with no insurance.

THE Clyde steamship Algonquin cleared from Jacksonville, Fla., Saturday last with 300,000 feet of lumber, 1000 bundles of shingles with other cargo.

THE immense lumber mill of the Bradley-Ramsey Lumber Co., at Lake Charles, La., will shortly begin operations after having been shut down for the past eight months.

THE dry-kiln and storage shingle shed at Lake Charles, La., owned by the John H. Poe Shingle Co., were destroyed by fire on the 8th inst. The loss amounts to about \$3000, with no insurance.

THE schooner Ellen M. Davenport was loading at Sabine Pass, Texas, on the 7th inst. for Boston. The Luther & Moore Lumber Co. is furnishing the cargo, which will contain 500,000 feet.

A LARGE real-estate deal was consummated in Louisville, Ky., last week by which the firm of Stratton & Terstegge purchased the large plant of the Wrampelmeier Furniture Co. for \$27,000.

THE receipts of lumber at the port of New Orleans last week were 1,300,000 feet, shingles 30,000 and laths 25,000. The total receipts of lumber since September 1 aggregate 14,217,724 feet, shingles 1,999,750 and laths 817,500.

THE Brown Lumber Co., of Grant, Texas, filed its charter with the secretary of state at Austin, Texas, on the 6th inst. The capital stock is \$20,000. The incorporators are Hugh Williams, W. J. Williams and G. W. Brown.

MESSRS. HILL, SEYMOUR AND MIDDLETON, a committee appointed to organize a branch of the Southern Lumber Exchange at Brunswick, Ga., are making extensive preparations for a convention of millmen called to meet in that city on the 16th inst.

A NUMBER of Chattanooga parties made quite an extensive land sale last week. A tract of timber land consisting of 4000

acres in Van Buren county was sold to a Canadian syndicate for about \$8000. The price secured for this land is regarded as extremely low.

THE Malvern Lumber Co., of St. Louis, has been extending its business operations. Recently it shipped to Canada several lots of yellow pine amounting to 100,000 feet. This is the first shipment made by this company into Canada, and business is likely to show a great improvement in this line.

THE lumber business in St. Louis for September is reported as follows: Receipts by rail 3842 cars, against 3429 cars for the corresponding month last year. The receipts from the lower rivers show a gain of 1,500,000 feet. The shipments of lumber were 2453 cars, against 2375 cars in 1893.

A SPECIAL from Carlisle, Ky., says: "The saw and planing mill at Parke's Ferry, Ky., owned by Dorsey, Wood, McLure & Co., valued at \$50,000, was burned on the 13th inst. The firm had insurance on their plant amounting to about \$10,000. The plant will be built at once by the present or a new company.

MR. DEXTER HUNTER, a prominent lumber dealer of Jacksonville, Fla., requests all manufacturers of yellow-pine lumber whose products are forwarded from Jacksonville and Fernandina to attend a meeting in that city on Tuesday, 16th inst. The object of the meeting is to organize a branch of the Southern Lumber Exchange.

THE buildings for the Eagle Pencil Co., at South Pittsburg, Tenn., will be completed this week. It will require several weeks to get the machinery in position, and it is expected that by December the works will be in full operation. It now has \$25,000 to \$30,000 worth of timber, and will consume annually about \$100,000 worth of cedar.

A SPECIAL from Beaumont, Texas, says: "A good sign that times are improving in this section is the fact that there have started up, or will commence operations in a few days, five logging railways—the Cow Creek tram and the Sabine tram, on the Sabine river, and the trams of the Texas Tram & Lumber Co., the Beaumont Lumber Co. and the Gulf, Beaumont & Kansas City, on the Neches river."

AN order has been passed by the Superior Court at Eastman, Ga., fixing \$50,000 as the price for the Empire Lumber Co.'s plant at Empire, Ga., and ordering the road sold at private sale on or before December 1. It is understood that this amount will pay the preferred debts, which are about one-fifteenth of the entire indebtedness, the whole being about \$800,000. The plant originally cost about \$350,000 and was considered the finest milling industry in the South.

J. B. GRIFFIN, an Iowa lumber dealer, has lately been making a tour of the Mississippi pineries, and has found more than a hundred mills in that State which had been closed up for more than a year, now running at their full capacity. He says that in Pensacola, the largest lumber exporting port in the United States, the bay is crowded with lumber vessels waiting for cargoes. He asserts that more than a thousand mills which were idle under the old tariff are now in active operation.

THE John Edwards Manufacturing Co., of Port Edwards, Wis., made a sale recently which will rank as the largest transaction ever made in hardwood lumber. The sale was made to E. Sondheimer & Co., of Chicago, and the aggregate of stock involved is about 5,000,000 feet, divided as follows: Basswood, 2,000,000 feet; red oak, 1,500,000 feet; black ash, 500,000 feet; elm, 200,000 feet, and birch, 300,000 feet. The lumber has been cut eight months and may be termed thoroughly dry. The company intend to cut 25,000,000

feet of white pine and hardwoods during the coming winter.

THE lumber trade at Jacksonville, Fla., is looking up, and shipments are of better volume. The clearances during the past week were as follows: Steamship Cherokee for New York with 200,000 feet of lumber and 100,000 shingles with other merchandise; the schooner Lois V. Chaples cleared for New York with 160,000 feet. The schooner Caroline Hall has made a good charter for a lumber cargo. She will load at Palatka for New York at \$5.37½. The British steamer Orinoco is chartered to load lumber at Jacksonville for Grenada at \$7.50. Coastwise freights are not materially changed. Inquiry for yellow-pine lumber vessels is beginning to pick up a little, and the feeling, if anything, is a shade firmer for South Atlantic ports.

#### Iron Markets.

CINCINNATI, October 13.

A steady demand of moderate proportions and well distributed characterized the week's business in pig iron. Buyers press for all there is in them the arguments of increasing production, of heavy stocks and low prices of lake ore and large output and low prices of Connellsville coke. Furnaces, on the other hand, call attention to the fact that, large as production is, compared with last spring and summer, it is scarcely three-fourths of the normal requirements of the country, and, what is more to the point, it is being taken as fast as made for actual consumption. Furthermore, the stocks in first hands are the lowest they have been for over a year. Averaging the two lines of arguments, it looks as if we might expect a slow, steady increase of consumption just about sufficient to take up the natural increase of output, and that prices will continue for a while without much change.

There is a tendency in some quarters to look for marked changes in the market after the November elections have put the seal of disapproval of the country on the tariff policy of the present administration. The chances are, however, that the changes to come in the future will be from natural business causes, and not from political influence or legislation.

The railroads are still a minus factor in the markets. Structural work has been the main reliance of the steel plants. Stove foundries are fairly active. Jobbing foundries are doing a little more, and there is a better demand from engine and machinery builders. The market closes at unchanged prices.

We quote for cash f. o. b. cars Cincinnati:

Southern coke No. 1 foundry.....	\$10 25@12 50
South. coke No. 2 f. d. y. and No. 1 soft.....	9 75@ 10 00
Hanging Rock coke No. 1.....	12 00@ 12 50
Hanging Rock charcoal No. 1.....	16 00@ 17 00
Tennessee charcoal No. 1.....	14 00@ 14 50
Jackson county stone coal No. 1.....	14 50@ 16 00
Southern coke, gray forge.....	8 75@ 9 00
Southern coke, mottled.....	8 50@ 8 75
Standard Alabama car-wheel.....	16 25@ 17 25
Tennessee car-wheel.....	15 50@ 16 00
Lake Superior car-wheel.....	16 00@ 16 50

BOSTON, October 13.

There is very little of an encouraging nature in the pig-iron business in New England. Most of the foundries are running on short time, and as there is nothing in sight which indicates any material advance in prices in the near future, buyers seem content to buy from hand to mouth rather than stock up.

We quote for cash delivered Boston:

Alabama No. 1 foundry.....	\$12 00@12 25
Alabama No. 2 f. d. y. and No. 1 soft.....	11 50@ 11 75
Alabama No. 3 f. d. y. and No. 2 soft.....	11 00@ 11 25
Alabama No. C. C. car-wheel.....	18 50@ 19 00
Strong L. S. coke iron No. 1 foundry.....	14 25@ 14 75
Lake Superior charcoal car-wheel.....	16 50@ 17 00
American-Scotch (Northern) No. 1.....	14 50@ 15 00
Jackson county silvery No. 1.....	17 25@ 18 00

PHILADELPHIA, October 13.

Salesmen who cover considerable territory, and who are in the best position to feel the pulse of the trade, report that trades are closed quickly and with less angling than has been necessary for so many months back. While prices for foundry and mill grades are no higher than



they were a week or so ago, they are firm, and but few concessions are asked or granted. In the Pittsburg district the outlook is brighter than it has been for some time. There is no accumulation of Bessemer iron, as it was supposed there would be, and steel billets for early delivery find fairly ready sale.

We quote for cash f. o. b. Philadelphia docks:

Standard Alabama No. 1 X.....	\$11 50@	\$12 00
Standard Alabama No. 2 X.....	11 00@	11 50
Strong lake ore coke iron No. 1 X..	13 50@	14 00
Strong lake ore coke iron No. 2 X..	12 50@	13 00
Lake Superior charcoal.....	15 00@	15 50
Standard Alabama C. C. W.....	18 00@	18 50

St. Louis, October 13.

There has been evidence of a desire on the part of leading producers of Southern iron to stiffen up prices. The furnaces are desirous of selling at a fixed schedule of prices, but any concession asked to secure a good order is positively declined without thanks.

The Lake Superior charcoal irons are in demand, and sales at unheard-of low figures for this class of iron are reported.

We quote for cash f. o. b. St. Louis:

Southern coke No. 1.....	\$10 75@	\$11 25
Southern coke No. 2.....	10 25@	10 75
Southern coke No. 3.....	9 75@	10 00
Southern gray forge.....	9 50@	9 75
Southern charcoal No. 1.....	14 00@	14 50
Missouri charcoal No. 1.....	12 50@	13 00
Ohio softeners.....	14 00@	14 50
Lake Superior car-wheel.....	15 50@	16 00
Southern car-wheel.....	16 75@	17 00
Genuine Connellsville coke.....	4 50	
West Virginia coke.....	4 75	

CHICAGO, October 13.

General trade conditions in the pig-iron lines continue much as at last report. The better feeling reported last week among various classes of manufacturers still continues, but the most conservative ones say that while they continue to hope for a real improvement, they cannot see that this is present or near at hand. The manufacturing plants are in position to turn out a large amount of work in almost every line, but the demand for the finished goods does not come up to the expectations of the producers. That conditions are generally ripe for a better state is admitted by all, but, throwing all sentiment aside and looking at the facts, consumption in the pig-iron line continues to lack the real expansion which has for so long a time been looked for, and should now appear.

Prices remain on the same basis as they have been for a considerable time past, both on Northern and Southern irons. The sellers who have stocks are ready to shade standard prices, but on the part of other manufacturers quotations are firmly held.

We quote for cash f. o. b. Chicago:

Southern coke No. 1 soft & No. 2 fdy.	\$10 75@	\$11 00
Southern coke No. 2 soft & No. 3 fdy.	10 50@	10 75
Ohio Scotch softeners No. 1.....	13 00@	13 50
Lake Superior charcoal Nos. 1 to 6..	15 00@	15 50

ROGERS, BROWN & CO.

### Pig-Iron Production.

During the past four months pig-iron production has been increasing in volume, and now it is believed that the maximum has been reached for the present. The weekly product of all the furnaces on October 1 was 159,729 tons, made by 172 furnaces. It is interesting to note that this is the largest weekly production since June, 1893. The Iron Age gives figures showing the status of the industry on October 1. Although but 118 out of 225 coke furnaces are in blast, their total weekly capacity is 138,575 tons. The 137 coke furnaces not in blast have a weekly capacity of but 80,034 tons, indicating that most of the larger furnaces are in operation. In six Southern States thirty-three out of eighty-three coke furnaces are in blast and producing 25,462 tons weekly. The fifty not in blast have a capacity of 25,200 tons weekly. Alabama heads the list with fourteen coke furnaces in operation producing 13,746 tons, over half the weekly production in the South. Only six charcoal furnaces are reported in operation in the South on October 1 out of a total of forty-five fur-

naces. These six furnaces have a weekly output of 1173 tons. For the country twenty-two charcoal furnaces, with a total weekly capacity of 4889 tons, are in operation. Those out of blast number 119, with a total weekly production of 13,743 tons. Thirty-nine of these, producing 5543 tons weekly, are in the South. During September several idle Southern furnaces went into blast.

### A Process for Working Titaniferous Ores.

The great difficulty in working ores containing titanium, on account of their infusible character, is a subject that certainly invites investigation and experiment. The immense field of these ores, representing as they do great wealth in iron, but at present of no commercial value for lack of an economical process of working them, offers abundant inducement for a reliable and practicable method of utilizing them.

The States of New York, Pennsylvania, Virginia and other districts in the United States contain vast beds of these ores. Some of the deposits contain large percentages of iron, but the various percentages of titanium found in them render them almost valueless in the manufacture of iron in blast furnaces. The lean ores having magnetic properties can be concentrated by the magnetic separator to 65 or 68 per cent. metallic iron. Most of these ores are very low in phosphorus, some fields containing but traces of this element. They are also very low in sulphur, which makes them excellent ores for the manufacture of steel. The infusible character of these ores, however, through the presence of titanium, makes it impossible to work them in blast furnaces in large quantities.

Small proportions of some of these ores have been used, but experience has shown that any considerable quantity in the burden makes the cinder mushy, proving that the temperature in the blast furnace is too low to reduce titaniferous ores. A method of utilizing these ores must therefore be sought outside of blast furnaces.

I would suggest the following mixed process to manufacture steel from these ores: Treat a large amount of rich ore in the presence of a metallic bath in an open-hearth furnace lined with material capable of withstanding great heat. An open-hearth furnace, lined with dolomite or graphite brick, would prove sufficient for working these ores. I would suggest graphitic brick as a lining, as it would be more beneficial in reducing the ores.

Crush the ore fine enough to pass through a 20 mesh sieve, and have the coke, coal or charcoal of about the same fineness. The ore and carbonaceous materials are mixed together in the following proportions by weight: 100 parts of ore to twenty-five parts of coke. The amount of carbonaceous material to be added to the ore can be calculated from the amount of oxygen contained in the ore. To the above mixture add the following: Lime to the extent of 2 per cent. of the weight of the ore; salt to the extent of 1 per cent. of the weight of the ore. The lime and salt, being stirred in water, is added to the mixture to constitute a flux and hold the mixture together. The mass is then molded into briquettes of suitable size and allowed to dry for six or eight days.

The heats are carried out by forming a metallic bath of pig iron. After the pig reaches a pasty state the briquettes previously warmed are added to the extent of 40 per cent. actual ore, and the process is carried out the same as in the manufacture of steel by the open hearth.

A steel, tough, capable of great hardness and useful for all commercial purposes, can be manufactured from these ores by the above process. When scrap iron can be bought cheaply part of the pig iron can be

replaced by scrap.—J. W. Thomas, Catauqua, Pa., in Iron Age.

### Decreasing Fuel Consumption in Iron-Making.

An exceptional record was recently made by Sewanee Furnace of the Tennessee Coal, Iron & Railroad Co., at Cowan, Tenn. The figures, as given by Rogers, Brown & Co., of Cincinnati, Ohio, offer some interesting testimony as to the opportunities and abilities of Southern furnaces to materially lessen their fuel consumption. The period under review is the six months ending August 31. The record shows an average fuel consumption of 2436 pounds of coke per ton of 2268 pounds. The furnace was in blast 173 days, producing on an average 143.4 tons per day and turning out a total of 24,408 tons in the period. Apart from the fact of the economy of this performance, a notable feature is the illustration it gives that such economy can be maintained for a continuous season, and attention is not being called to an unusual record for a short time. The doubt as to the ability of Southern furnaces to maintain a low fuel consumption for a long period is dispelled by this performance, referring to which the Iron Age says: "Since the plant has only one stack, the question cannot arise that the results have been achieved by applying any blowing or heating power belonging to other furnaces." The iron made is reported to be exceptionally strong and fine in quality as a foundry iron.

### BUSINESS CONDITIONS SOUTH.

Extracts from Letters to the Manufacturers' Record.

Wilmington, N. C.—A. G. & R. F. Warren: "Business is looking very bright in our section. We are looking for a large fall trade."

Calvert, Texas.—J. T. Fuller: "Business has revived to a great extent. Confidence is felt by the people in general, and in all, despite the low opening of cotton this season, there seems to be a happy outlook for business of my class."

Chattanooga, Tenn.—Chattanooga Plow Co.: "The indications throughout the South are that there will be increased demand for all lines of goods."

Kissimmee, Fla.—Bass & Grainger: "The outlook is very good here at the present time for manufacturing."

Sparta, Tenn.—Sparta Pulp and Paper Mills: "Everybody seems to be more hopeful and times are improving."

Macon, Ga.—R. L. McKenney: "The outlook at present is very bright, as business is improving very rapidly."

Chattanooga, Tenn.—The Benjamin Butter-Dish Manufacturing Co.: "Business in our line is looking brighter. Orders are not large as a rule, but numerous inquiries serve to indicate prospect for active business in the near future."

Windermere, Fla.—Windermere Investment Co.: "The outlook is very good for business in this section."

Buena Vista, Va.—W. N. Seay & Son, furniture manufacturers: "Business is improving, and the outlook is brighter than it has been for two years. We are looking for a big revival in the spring. Business men are looking out for investments."

Wakefield, Va.—The Bain Peanut Co.: "Our money crop is lower than ever known since the war, but our people are economizing, and there bids to be a fair fall trade. All manufacturing concerns are running full time."

Huntsville, Ala.—The West Huntsville Furniture Co.: "The outlook for business in our line is good, as we have contracts that will keep us busy for the next year."

Durham, N. C.—R. D. Patterson: "The prospect for business at present is better, and when the present crops are marketed

the outlook will be better than for several years. The farmers are generally free from debt on present crop, and we look for better times next year."

Blossburg, Ala.—E. M. Tutwiler: "The coal trade is dull, but there is every indication of any early improvement."

Myers P. O., S. C.—Farmers' Basket & Package Co.: "While the outlook, on account of low price of cotton, is not very flattering, it is much better than last year."

Tuscaloosa, Ala.—The Searcy Rope and Yarn Mills: "Business outlook very good."

Gilmer, Texas.—Tyler Star Lumber Co.: "Business outlook is fair; demand for lumber very good. Mills that have been closed down, we learn, some of them have started and others will soon start up again, which is a good indication of at least a better demand. We are running full time."

Corsicana, Texas.—H. L. Scales, manager of the Corsicana Cotton Oil Co.: "Business in this section is very much improved. Crops are better than they have been for years, and the weather is favorable for the maturing and gathering of the crops. Labor is scarce. The outlook is much better than it has been for two or three years."

Hampton, Fla.—Wright & Scandrett: "The outlook for business is good, and the prospect for manufacturing interest was never better in our section."

It is gratifying to note the decided interest that is being aroused throughout the South in the question of good roads. This is the dominant question of public discussion before the South today. The trade organizations and commercial bodies throughout the whole South are giving attention to this important matter.

MANAGERS of mills, factories, furnaces, mines, etc., and parties starting manufacturing enterprises and needing machinery or supplies of any kind will find it profitable to consult the advertising columns of the MANUFACTURERS' RECORD. Its pages contain names of the best houses in the country among manufacturers of and dealers in machinery and mill supplies.

### TRADE LITERATURE.

AN illustrated catalogue and price-list of fire-hose manufactured by the Boston Belting Co., of Boston, Mass., has been issued by that company. This company has supplied its product to many of the leading cities of the United States and Canada. The wide use of the company's product is the best testimony of its merits. The catalogue shows the various styles of hose as used by fire departments, hotels, manufacturing establishments, etc. The company also manufactures couplings, nozzles and hose-testing pumps, all of which have met with approval for fire use. A copy of the catalogue will be sent on application.

A PAMPHLET relating to coal-mining machines, air compressors and general coal-mining machinery and appliances will shortly be issued by the Ingersoll Sergeant Drill Co., of New York city. From an examination of the advance sheets sent us this book will prove very interesting to bituminous coal operators and to mining men generally, and the concise style in which its contents are put will be an appreciated feature. A notable chapter gives some figures as to the relative cost of hand labor and machines in coal-mining. It will be of interest to state that a net saving of nineteen cents per ton in the cost of producing coal is shown in favor of the employment of machines.

THE water-proof treatment of covers, as furnished by the National Water-Proof Fibre Co., 36 South street, New York city, is described by some literature being sent out by the company. Among the advantages claimed for these covers are that they will not heat or stick when piled together; are water-proof and mildew proof; will not crack or scale off; can be rolled up when wet without injuring them; not inviting to rats and vermin, and cheapness. This company makes a plant-bed-protecting cloth which affords a cheap substitute for glass on hotbeds. It is extensively used and endorsed by florists, gardeners and growers. It gives, we are informed, complete protection from frosts, and promotes hardy, vigorous growth.



# CONSTRUCTION DEPARTMENT.

**WE PUBLISH, every week, a list of every new factory, of whatever kind, projected anywhere in the South; every railroad under-taken, and every mining company organized. This information is always fresh and, by enabling manufacturers to correspond with the projectors of such enterprises before their supplies of machinery have been purchased, is of great value. Manufacturers will find it to their interest to read this department carefully each week.**

\*Means machinery is wanted, particulars of which will be found under the head of "Machinery Wanted."

†In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the MANUFACTURERS' RECORD.

## ALABAMA.

**Birmingham—Knitting Mill.**—The Birmingham Dry Goods Co. is gradually developing a small knitting mill, and is at present adding some new machines.

**Franklin County—Iron Mines.**—Tere A. Clark and Northern parties have obtained a 10-year lease on iron mines located thirty miles from Tusculum, in Franklin county. Active mining will be commenced as soon as a branch railroad, now building, is completed.

**Mobile—Electric Plant.**—The Mobile Light & Railway Co. will add to its plant two new dynamos; order has been placed for the machinery.

**Newton—Cotton Mill.**—The erection of a cotton mill is talked of.

**Ozark—Cigar Factory.**—L. Aikins, of Florida, may start a cigar factory in Ozark.

**Piedmont—Shoe Factory.**—The Piedmont Shoe Manufacturing will increase its capacity.

**Tecumseh—Reservoir.**—The Tecumseh Iron Works is building a large reservoir.

## ARKANSAS.

**Fayetteville—Water Works.**—The water works lately noted will be built at once, contract having been let at \$10,000. Address the mayor.

**Morrilton—Cottonseed-oil Mill.**—J. B. Wooten will erect a cottonseed-oil mill of twenty tons capacity.\*

**Stuttgart—Lumber Company.**—F. F., S. M., L. M. and W. J. Savage have incorporated the Savage Bros. Lumber Co. with a capital stock of \$25,000.

## FLORIDA.

**Jacksonville—Electric-light Plant.**—The board of public works has awarded contract for the municipal electric-light plant recently decided upon. The successful bidder was the General Electric Co., of Atlanta, Ga., and the plant is to cost about \$72,850, and will supply 250 arc lights and 4000 incandescent lights. The building is to be 50x100 feet, and work on it will commence at once.

**Jacksonville—Brewery.**—Chicago parties will erect a large brewing plant in Jacksonville at a cost of \$200,000. Scott & Acosta will prepare plans for the buildings.

**Lakeland—Ice Factory.**—C. W. Waggoner will erect a plant for the manufacture of fifteen tons of ice daily. Complete arrangements have been made for the machinery.

**Lakeland—Steam Laundry.**—C. E. McMullen & Roach will establish a steam laundry.

**Okahumpka—Packing-house.**—Marsh & Bennett have completed their packing house.

**Palatka—Electric Plant.**—The Palatka Gas Light & Fuel Co. has purchased an electric-light and power plant and will erect same at once. G. L. Bailey is president.

**St. Augustine—Telephone System.**—The Interstate Telephone Co., of Louisville, Ky., proposes to construct a telephone system in St. Augustine.

**Tampa—Lumber Plant.**—Work on Wing & Kendrick's new lumber plant on the Hillsborough river is progressing rapidly, the buildings being completed and the machinery now arriving daily. Operations are expected to be commenced by December 1, producing 10,000 shingles and 75,000 feet of lumber daily.

**Tampa—General Contractors.**—The I. J. Farnsworth Co. has been organized, its purpose being to sink wells, build houses, etc.

**Ybor City—Box Factory.**—The Ybor City Box Co., manufacturers of cigar boxes, has consolidated with the Tampa Box Co. August Roesler, of New York, is president; A. A. Wood, of Ybor City, treasurer, and Henry Leyman, of New York, secretary.

## GEORGIA.

**Brunswick—Match Factory.**—Rosenda Torras has started a factory for making matches from paper.

**Buford—Manufacturing, etc.**—A \$10,000 stock company is being organized to conduct a mercantile, manufacturing and tanning business. James P. Pharr, D. F. Verner, M. S. Garner and others are interested.

**Carrollton—Cotton Mill.**—A proposition for the organization of a cotton mill has been made by David Haas.

**Dawson—Electric-light and Water Works.**—The city council has ordered an election for November 14 to decide as to an issuance of \$35,000 in bonds to build an electric-light plant and water works. Address the mayor.

**Elberton—Cotton Mill.**—The Swift Cotton Mills will put in another rope machine and other machinery.\*

**Elberton—Foundry and Machine Shops.**—Thomas Bailey, of Athens, will erect a foundry and machine shop in Elberton at a cost of from \$10,000 to \$15,000. About thirty hands will be employed at the start, and the product will be saw mills, cotton presses, mill and mining machinery, etc.\*

**Macon—Immigration.**—The Georgia Immigration Bureau has applied for a charter. R. E. Park, W. M. Gordon, E. A. Ross and others being the incorporators; capital stock \$25,000.

**Milledgeville—Bridge.**—Contract has been awarded to Geo. H. Crafts, of Atlanta, for the erection of a bridge over Fishing creek near Milledgeville. The bridge will be 160 feet long, sixteen feet wide, and cost \$4856.

**Tallapoosa—Handle Factory.**—The establishment of a handle factory is proposed. N. W. Brown can be addressed.

**Valdosta—Foundry and Machine Shops.**—The Valdosta Foundry and Machine Shops are being enlarged.

**Valdosta—Saw Mill.**—The new saw mill being built by E. L. Moore and others, already reported, is approaching completion. The plant will have a daily capacity of 20,000 feet of lumber, and business will be conducted as the Valdosta Lumber Co.

## KENTUCKY.

**Henderson—Tobacco Works.**—G. H. Bernhard, of Henderson, and C. F. Gloystein, of Bremen, Germany, have formed a partnership for the manufacture of tobacco extract, etc.

**Lexington—Saw Mill.**—C. J. Stratton will erect a plant for sawing hardwood lumber.

**Louisville—Barrel and Keg Factory.**—The National Cooperage Co., of La Crosse, Wis., contemplates erecting a barrel and beer-keg factory in the South, and representatives have been in Louisville during the last ten days investigating the city's advantages.

**Lancaster—Distillery.**—James Levi & Bro., of Cincinnati, have purchased John W. Miller's distillery at Lancaster for \$6250. The purchasers will increase the capacity of the plant to a 100-bushel mash.

**Owensboro—Tobacco Factory.**—W. D. Meriwether & Co., of Clarksville, Tenn., will remove their tobacco factory to Owensboro.

**Paisley—Flour Mill.**—James McKechme & Sons have put in a 40 barrel flour mill.

**Zoneton—Corn and Flour Mill.**—Burdett Bros. have built a 40-barrel flour mill and corn mill.

## LOUISIANA.

**Abbeville—Sugar Refinery.**—It is proposed to build a sugar refinery on Bayou Vermillion. R. H. Washburn and Lastie Broussard are interested.

**Alexandria—Iron Foundry.**—C. F. Contois, late of the Beaumont (Texas) Iron Works, will establish a foundry in Alexandria.

**Lurich (not a postoffice)—Bridge.**—For information regarding the proposed \$15,000 bridge, noted last week, address W. B. Morton, Johnson's Cross Roads, W. Va.

**New Orleans—Glass Works.**—Black & Heagy write us that they will start glass works.

**New Orleans—Ice-skating Rink.**—Robert R. Zell, of Baltimore, Md., announces his intention of building in New Orleans an ice-skating rink at a cost of \$100,000. The building is to be 300x100 feet, with a skating surface 250x55 feet.

**New Orleans—Iron Bridges.**—Chas. R. Kennedy, comptroller, will open bids on November 9 for the construction of two iron bridges.

## MARYLAND.

**Baltimore—Marine Machine Shops.**—Additions of fine new machinery have been made to the marine

machine shops of the R. M. Spedden Co., foot of Broadway. A set of plate and bar-bending rolls, already received, are seventeen feet long, with a capacity to bend plate or bar iron from three-quarters of an inch to one and one-half inches thick. Two pairs of double engines drive the rolls, which, with their attachments, weigh 60,000 pounds. The company has also added new steam drills and boring bars and built a plate and bar-heating furnace forty-five feet long.

**Baltimore—Harbor-dredging.**—Contract has been awarded to the Baltimore Dredging Co. for \$50,000 for dredging in the ship channels of Baltimore.

**Baltimore—Shoe Company.**—The Pridgen-Herdon Shoe Co. has been incorporated by John I. Pridgen, Roberdean Annan and Arthur B. Chancellor, of Baltimore; Edmund W. Herndon, of Lynchburg, Va., and Thomas J. Copeland, of Randleman, N. C. The company will conduct a wholesale boot and shoe business. Its capital stock is \$25,000.

**Baltimore—Canneries.**—Moore & Brady and J. S. Farren & Co. will remove their North Carolina canneries to Baltimore.

**Baltimore—Cannery.**—The Vandermere Oyster Co. is removing its North Carolina cannery to Baltimore.

**Baltimore—Machine Shops.**—Officials of the B. & O. R. R. Co. have talked with Baldwin & Pennington concerning the erection of new repair shops. A report states that a plant to employ from 300 to 500 men will be built.

**Baltimore—Oil Works.**—The Chesapeake Oil Co., for manufacturing oils, varnishes, japs and axle grease, has been incorporated by Catherine E., Frank A., Ferdinand T., Charles A. and Margaret Rahter, with a capital stock of \$5000.

**Belair—Carriage Factory.**—The Enterprise Carriage Co. will remodel Stagner's Hotel for a factory.

**Carroll—Lumber Plant.**—Schlosser & Steinacker have built a saw and planing mill.

**Cumberland—Repair Shop.**—It is reported that the B. & O. R. R. Co. will erect a repair shop.

**Eastport—Glass Works.**—Louis H. Rehn, of Annapolis, writing in regard to the Eastport Glass Works, lately noted, states that he purchased the plant recently at trustee's sale, and that it is his intention to organize a company to operate same. The plant needs some repairs and improvements, as it has been idle for several years.

**Maryland—Dredging.**—Wm. F. Smith, U. S. A., Wilmington, Del., will receive proposals until November 9 for dredging in Chester, Choptank, La Trappe, Warwick, Wicomico and Manokin rivers in Maryland.

**Terra-Cotta, D. C.—Terra-cotta Works.**—Alfred G. Safford, Goodwin V. Attee and Wyman L. Cole have incorporated the Potomac Terra-Cotta Co. with a capital stock of \$100,000. The company will operate the plant noted last week as sold for \$50,000.

## MISSISSIPPI.

**Hattiesburg—Saw Mill.**—J. S. Blackburn writes to the MANUFACTURERS' RECORD that he has placed order for a largest size band-saw mill, and the plant is to be built at once. The outfit of machinery is to cost about \$40,000.

**Meridian—Cotton Company.**—Thomas C. Carter, Eugene H. Carter and Edward G. Carter have incorporated the Meridian Cotton Co. for the purpose of dealing in cotton, etc., erect compresses, etc. The capital stock is \$25,000, with privilege of increasing to \$250,000.

**Vicksburg—Furniture Company.**—W. C. Raum, Jr., R. M. Bruce and L. H. Wolcott have incorporated the Delta Furniture Co. to deal in furniture, etc.; capital stock \$5000.

**Vicksburg—Machine Company.**—W. H. and S. B. Stowers and L. A. Taylor have incorporated the Stowers Machine Co. to buy and sell machinery, etc; capital stock \$5000.

## MISSOURI.

**Chillicothe—Produce Company.**—A. Lowenstein, S. Jonas and L. S. Marks have incorporated the Lowenstein Produce Co. with a capital stock of \$10,000.

**Leeds—Coal Mines.**—I. B. Fleming, of Kansas City, has purchased at public sale the mines and equipment of the Kansas City Clay & Coal Co., located at Leeds. The price paid for the property was \$18,500.

**Salisbury—Ice Factory.**—There are some prospects of an ice factory being established.

**St. Louis—Wall-paper Company.**—The Hummell Wall Paper Co. has been incorporated with a capital stock of \$10,000.

**St. Louis—Lumber Company.**—Geo. J. Tansey, H. P. Broughton and Jesse M. Grubbs, of St. Louis, and Wm. B. Switzer, of Belleville, Ill., have incorporated the Saginaw Lumber Co. with a capital stock of \$40,000.

## NORTH CAROLINA.

**Charlotte—Cotton Mill.**—The Ada Mills will put on a night force and operate its plant night and day.

**Elizabeth City—Water Works.**—The erection of a water-works plant for fire protection is talked of; C. C. Allen, city clerk.

**Elon College—Electric-light Plant.**—Holt, Gant & Holt will put an electric-light plant in their cotton mill.\*

**Flat Rock—Wagon Works.**—M. S. Farmer contemplates establishing wagon works.\*

**Georgeville—Gold Mine.**—Mr. Mezzler, of Charlotte, is at the old Reed gold mine investigating it for Ohio capitalists, who will develop same if it proves satisfactory.

**Gold Hill—Gold Mine.**—Howland & Collins have purchased the Icenhow & Mauney gold mine, and will develop same. M. F. Powell, of Charlotte, is engineer for the above firm.

**High Point—Furniture Factory.**—The High Point Furniture Co. will at once rebuild its burned factory, the new plant to be much larger than the old one.\*

**Huntersville—Electric-light Plant.**—The Virgin Cotton Mills has let contract for a 100-light electric plant.

**Ita—Gold Mines.**—S. P. Dunn, of Cleveland, Ohio, and associates, already noted (under Halifax county) as having chartered a \$500,000 mining company, have purchased 100 acres of land in Halifax county. The company is known as the Chataqua Gold Mining & Milling Co., and extensive gold-mining will be inaugurated at once, expending \$25,000 for machinery and sinking shafts. Two hundred hands will be employed at the start, and the company writes that the vein to be developed averages two and a-half feet in width and averages \$63 per ton in free gold. Assays were made by Columbia College, Washington, D. C.

**Kinston—Brick Works and Saw Mill.**—The Labor Exchange talks of erecting a saw mill and brick kiln on the lands of Frank Daughety, in the Hebron neighborhood.

**Lincolnton—Cotton Mill.**—J. A. Abernethy and associates, noted last week as to erect a cotton mill, have already commenced work on the building for same. Equipment of 5000 spindles will be put in for 50 yards and above, two p y.

**Mayock—Corn Mill.**—C. R. Van De Carr has started a corn mill.

**Milledgeville—Cotton Mill.**—The new cotton mill of the National Manufacturing Co. is progressing rapidly, and will soon be completed.

**Morganton—Cotton Mills.**—S. Huffman, W. G. Hogan, L. A. Bristol and D. B. Mail and associates have incorporated the Attacoo Cotton Mills for the purpose of manufacturing yarns, warps, cloths, etc. The capital stock is placed at \$20,000.

**New Berne—Shirt Factory.**—A report says that W. J. Hurst, of Philadelphia, Pa., considers starting a shirt factory in North Carolina.

**Raleigh—Trouser Factory.**—A trouser factory to employ 20 persons will be established. Machinery has been bought and twenty operatives will be employed, making 300 pairs of pants daily. Moses C. Winston and Claude B. Barbee own the plant; J. W. Walker, manager.

**Rock Cul—Dry-kilns and Lumber Mill.**—Kincaid & Bro. are rebuilding their burned dry-kilns, and will add new machinery to their lumber plant later on.\*

**Rockingham—Saw Mill.**—J. M. Ford is rebuilding his saw mill lately burned; machinery all purchased.

**Statesville—Tobacco Factory.**—Key & Co.'s new factory building, lately completed, is a five-story brick structure fitted with all modern equipments. The outfit of machinery for manufacturing tobacco will be put in during the winter.

**Warrenton—Canning Factory.**—Mr. Freestone, of Baltimore, Md., proposes establishing a canning factory in Warrenton.

**Wilmington—Dredging.**—W. S. Stanton, U. S. A., will receive sealed proposals until November 7 for dredging in waterway between Beaufort Harbor and New River, N. C.

**Wilmington—Jetty.**—W. S. Stanton will receive sealed proposals until November 7 for extending jetty at North Island, Winyaw bay, S. C.

## SOUTH CAROLINA.

**Gaffney—Cotton Mill.**—The Gaffney Manufacturing Co., noted last month as to erect another mill, has let contract for the erection of the buildings, of which the mill proper is to be four stories high, 100x320 feet. Buildings are to be completed by next August, and an equipment of 25,000 spindles and 700 looms has been ordered. The new plant will employ over 300 hands, and will be capitalized at \$425,000; H. D. Wheat, president.

**Ridgeway—Telephone Line.**—E. C. Heins will



build a telephone line to Camden, a distance of twenty-five miles.

**Rock Hill—Water-power.**—John R. London, of Rock Hill; W. A. Courtenay, of Newry; T. C. Robertson and Allen Jones, of Columbia, have incorporated the Landsford Water-Power Co. with a capital stock of \$50,000.

**Spartanburg—Guano Factory.**—George A. Le Maistre, of Wilmington, Del., has made arrangements for the erection of a \$100,000 guano factory in Spartanburg. A company is being formed now, and charter has already been applied for. Mr. Le Maistre will be manager.

#### TENNESSEE.

**Clarksville—Creamery.**—E. V. Harrison offers to be one of five men to establish the proposed creamery already noted.\*

**Clarksville—Cigar Factory.**—Frank F. Davidson has started a cigar factory.

**Dyersburg—Canning Factory.**—It is proposed to start a cannery, and a company may be formed. W. A. Stone is interested.

**Fentress County—Oil Wells, etc.**—F. H. Burt, of Harrison, and others own a large acreage of land in Fentress, Overton and Putnam counties which they propose to develop for oil, etc. A stock company is now being organized to push the work.

**Green Brier—Gold Mine.**—J. H. Reid, formerly of Ohio, and John Jones, of Sevier county, have purchased 13,000 acres of land in Sevier county, and will develop gold deposits known to be located on same. Mr. Reid was in Knoxville last week buying machinery for the proposed work.

**Jackson—Electric-power Plant.**—The Jackson & Suburban Street Railroad Co. has about definitely decided to construct an electric car line, and the power plant will be built shortly.

**Jackson—Chair Factory.**—A Michigan party purposes locating a chair factory to employ 275 hands. S. D. Hays can be addressed.

**Kettle Mills—Flour Mill.**—Kennedy, Delk & Co. are building a flour mill of 100 barrels capacity daily.

**Knoxville—Soap Factory.**—James Bell has made extensive improvements to the old Unaka Soap Factory, and will put the plant in operation at once, giving employment to twenty-five men. New machinery is being put in, and the daily output will be 7500 pounds of soap.

**Lenior—Car-wheel Works.**—The Bass Car Wheel Works, just completed, will commence making castings with n two weeks; capacity 250 wheels daily, besides soft castings, for which the equipment is complete. J. H. Bass, of Fort Wayne, Ind., is proprietor of this plant.

**Lewisburg—Woodworking Plant.**—J. M. Tonkesley will build a woodworking plant.

**Memphis—Soap Factory.**—H. G. Campbell, 308 Main street, may engage in the manufacture of soap.

**Nashville—Soda Works.**—The Southern Soda Works contemplates a new building with increased capacity in the very near future.

#### TEXAS.

**Cameron—Water Works.**—C. H. Yoe, John M. Helley, C. W. Lawrence, F. M. Crawford, M. M. Kemp, H. F. Smith and M. P. Kelley have incorporated the Cameron Water, Power & Light Co. with a capital stock of \$50,000. This company will build and operate the water works noted last week, and bids are now being advertised for. C. W. Lawrence is secretary and treasurer.\*

**Dallas—Cotton Mill.**—A Northern manufacturer has written to the Commercial Club regarding the erection of a cotton-yarn mill. A plant to employ 300 hands is contemplated.

**Dallas—Well Company.**—S. A. Horton, Thos. F. McEnnis, John Hall and others have incorporated the Horton Deep-Water & Artesian Well Co. with a capital stock of \$100,000.

**Fort Worth—Car Works.**—J. C. McCarthy has returned from the East, where he has been endeavoring to interest capital in the erection of car works at Fort Worth. A \$100,000 plant is proposed, and Mr. McCarthy says that the chances of locating it are excellent.

**Galveston—Manufacturing.**—The Sagina Manufacturing Co., already noted as chartered, intends to manufacture a compound called "Sagina" a flesh producing food, etc.; J. J. Schott and others, incorporators.

**Galveston—Theatrical Company.**—Henry Greenwall, Leon Blum, M. Lasker and others have incorporated the Greenwall Theatrical Circuit Co. with a capital stock of \$100,000.

**Grant (not a postoffice)—Lumber Mills.**—Hugh Williams and W. J. Williams, of Taylor, and G. W. Brown, of Grant, have incorporated the Brown Lumber Co. with a capital stock of \$20,000; principal office at Taylor. The company's purpose is to manufacture lumber, sash, doors, blinds, etc.

**Hillsboro—Sewer System.**—The city contemplates constructing a sewer system, and it is reported that D. A. Pryor, of Dallas, will prepare plans.

**Houston—Corn and Flour Mill.**—A project is on foot to erect a 500-barrel flour mill and 200-barrel

corn mill to cost about \$85,000, with a 75,000-bushel grain elevator. The buildings will be of brick and the elevator of frame covered with corrugated iron. The machinery will be new and the most modern possible to obtain. A cross-compound condensing Corliss engine will supply the power. Plans have already been made by McCutcheon & Co., of Houston, and several prominent merchants are said to be interested.

**Houston—Factory.**—Wilder & Segar will manufacture the Wheelon adjustable shade fixture.

**La Porte—Implement Factory.**—J. B. Ammons, of Houston, has contracted to erect in La Porte a plant for the manufacture of plows, cultivators and other farming implements. The necessary buildings will be built at once, and operations are expected to commence within sixty days. Twenty-five cottages will be built for employees.

**Llano—Serpentine Quarry.**—It is reported that N. J. Badu, of Austin, will develop a serpentine quarry near Llano.

**Rockdale—Ice Plant.**—C. H. Coffield contemplates putting in a seven-ton ice plant for the coming season.\*

**San Antonio—Coal Mine.**—Geo. P. Weldon may develop a newly-discovered gold vein twelve miles from the city.

**Taylor—Sewer System.**—A report states that a \$10,000 sewer system is contemplated. The mayor can be addressed.

**Temple—Cotton Compress.**—J. T. Smith, W. E. Hall, J. Z. Miller, Jr., L. R. Wade and C. Hunter have incorporated the Temple Compress Co., and will erect a cotton compress at once. The capital stock is \$100,000.

**Temple—Cotton Compress.**—Inman & Co., of Houston, are stated to contemplate building a compress in Temple.

**Terrell—Water Works.**—A report says that water works are talked of.

**Trinity—Water Works.**—The construction of a water system is projected, and if same is built a broom factory, cannery, laundry, woodworking and other plants will be built. Address the mayor.

**Victoria—Electric-light and Ice Plant.**—James Royer is overhauling his electric-light and ice plant and putting in new machinery.

**Waxahachie—Water Works.**—The city council has authorized the purchase of pipes, standpipe and hydrants for a new system of water works; plant is to be completed in sixty days. Address the mayor.

#### VIRGINIA.

**Boonesville—Corn Mill.**—J. W. Dalton is building a corn mill.\*

**Charlottesville—Slate-pencil Works.**—A charter has been granted to the Virginia Soapstone Slate Pencil Co. with a capital stock of \$10,000, its purpose being to manufacture slate pencils on a large scale. M. Kauffman is president; C. T. O'Callahan, vice-president, and A. C. Brechin, secretary-treasurer. The works are located in Albemarle county.

**Charlottesville—Electric-power Plant.**—The Piedmont Construction & Improvement Co. has placed order for the equipment of its proposed electric-power plant. A new building will be erected at once.

**Danville—Cotton Mills.**—The Riverside Cotton Mills, now building large additions to its plant, has decided to increase its capital stock by \$300,000, making it \$1,800,000.

**Edinburg—Iron Works.**—Alexander Balfour, of Philadelphia, Pa., has recently purchased the Columbia-Liberty Iron Works, in Shenandoah county, at commissioner's sale. The price paid was \$25,000, and the sale is subject to confirmation by the United States District Court.

**Newport News.**—The Chesapeake & Ohio Railway has ordered three freight-handling machines with a capacity of 90,000 pounds each for use on the piers.

**Portsmouth—Lumber Mill.**—Frank Hitch, of Hamilton, N. C., now operating a lumber mill there, writes that he will locate a plant at Portsmouth.

**Portsmouth—Manufacturing.**—J. P. A. Mottu, of Norfolk, is now in Europe negotiating for the establishment of a large industrial plant on the property of the Portsmouth Company.

**Reusens—Furnace, Rolling Mills, etc.**—David Lamar, Lynchburg, has purchased the rolling mill, furnace and other property of the Virginia Nail and Iron Works at \$35,000. The property is located at Reusens, and over 300 operatives will be employed in same in the near future.

**Roanoke—Investment Company.**—A charter of incorporation has been granted to the Scottish Investment Co., which is to have a capital of \$25,000, with power to increase to \$50,000. J. R. Terry is president; S. W. Jamison, vice-president and treasurer, and H. M. Darnall, secretary, who, with J. A. Jamison and John T. Trout, constitute the board of directors. The company proposes to do a general real-estate business.

**Wytheville—Coal Mines.**—An eight-foot vein of gold has been discovered on Brushy mountain lands owned by J. E. Perkins, J. B. Barrett and J. C. Sexton.

#### WEST VIRGINIA.

**Central City—Glass Works.**—The Huntington Glass Manufacturing Co. has succeeded to the business of the Huntington Glass Co., and will operate the plant in future. Work will be resumed on the 15th inst., producing a general line of tableware. Addison Thompson is general manager.

**Charleston—Water Works.**—L. Prichard, W. T. Edwards, H. L. and F. C. Prichard and J. D. Foster have incorporated the Catlettsburg, Kenova & Ceredo Water Co. with a capital stock of \$500,000.

**Charleston—Telephone System.**—A plan is afoot for the organization of a company to establish a new telephone system. J. M. Payne and D. C. Gallaher are interested.

**Charleston—Folding-bed Factory.**—The Standard Folding Bed Co. has its new factory buildings nearly completed, and the Point Pleasant plant will be moved to Charleston in December. About 125 men will be employed.

**Fayette County—Coal Mines.**—Pennsylvania parties have leased 2215 acres of coal lands in Fayette county and will develop same. The property is underlaid with a six-foot three-inch vein of fine coking coal, and operations will commence at once.

**Huntington—Gas and Oil Development.**—A charter has been granted to a \$1,000,000 stock company which will develop gas and oil lands in West Virginia. E. T. Johnson, of Buffalo, N. Y., is president; James Booth, of Huntington, vice-president, and C. F. Cole, of Huntington, secretary.

**Huntington—Manufacturing.**—The Imperial Electric Bell & Fire-Alarm Manufacturing Co. has been organized with James K. Oney, president; A. T. Cherry, vice president; E. B. Enslow, treasurer, and F. M. Hartman, secretary. This company intends to manufacture a number of patents which it owns, and expects to build up in a year a business employing 400 or 500 hands.

**Moundsville—Baby-carriage-wheel Factory.**—A party is endeavoring to organize a \$50,000 stock company to manufacture patent baby-carriage wheels.

**Weston—Cold-storage Plant.**—Among some improvements contemplated by the directors of the asylum is the erection of a cold-storage building.

**Wheeling—Electric Smelting Works, etc.**—The American Electric Smelting Co., lately noted as having obtained charter, has organized and elected J. A. Campbell, president; T. H. B. Haase, vice president and general manager; Robert C. Haas, secretary; Charles Menkemeller, treasurer, and Jos. B. Hall, manager operating department. The company's purpose is to manufacture aluminum and other metals by electric and other processes under the patents of Jos. B. Hall.

#### BURNED.

**Crawford, Texas.**—L. P. Whittenburg's steam gin; loss \$6000.

**Elberton, Ga.**—T. J. Warren's cotton gin.

**Elgin, Texas.**—Joe Dorris's cotton gin.

**Granbury, Texas.**—A. P. Gordon's cotton gin.

**Helena, Ark.**—Holtzclaw & Ray's cotton gin.

**High Point, N. C.**—Wrenn Bros.' furniture factory; loss \$10,000.

**Kerens, Texas.**—J. M. Grant's cotton gin; loss \$2500.

**Ladonia, Texas.**—H. B. Cobb's cotton gin.

**Lake Charles, La.**—The Jno. H. Poe Lumber Co.'s dry-kiln.

**Morrilton, Ark.**—W. H. Evan's cotton gin.

**Pemberton, Va.**—Geo. Campbell & Co.'s bark and sumac mill; loss \$7000.

#### BUILDING NOTES.

**Albany, Ga.—Synagogue.**—Plans by Lockwood Bros., of Columbus, have been accepted for the new synagogue to be built in Albany at a cost of \$8000.

**Baltimore, Md.—Hall.**—The Northwestern Junior Order of United American Mechanics' Association has been incorporated with a capital stock of \$10,000 to build a hall. Ulysses Seal, Walter C. Wessels and others are incorporators.

**Bartlett, Texas—Business Building.**—Mr. Spencer, of Belton, will erect a brick business building in Bartlett; site has been bought from E. G. Armstrong.

**Bay City (P. O. Wharton), Texas—Jail.**—A two-story brick jail will be built. Address the county clerk.

**Brevard, N. C.—Hotel.**—A fine hotel will be built at Brevard. Henry M. Warren & Co., 115 Broadway, New York, can give information.

**Cumberland, Md.—Roundhouse.**—The Baltimore & Ohio Railroad Co. will erect a large roundhouse. Plans are being prepared in Baltimore.

**Danville, Va.**—T. B. Fitzgerald and others will erect a block of brick buildings, two stories high, 81x112 feet, at a cost of \$30,000.

**Durham, N. C.—Cotton-house.**—The Pearl Cotton Mills will erect a new cotton-house.

**Harlowe (P. O. Kendrick), Fla.—Church, etc.**—A church and a school building will be erected. A. H. Agnew can be addressed.

**Huntington, W. Va.—Business-house.**—J. N. Harris will erect a six-story business-house.

**Jacksonville, Fla.—Public Building.**—The Knoxville Building & Contracting Co. will probably receive contract to erect the proposed public building, its bid being the lowest (\$16,000).

**Kansas City, Mo.—Public Hall.**—It is proposed to form a \$25,000 stock company to erect a public hall. The secretary of the Commercial Club can be addressed.

**Kansas City, Mo.—Warehouse.**—L. G. Middaugh, Massachusetts Building, has prepared plans for an implement warehouse to be erected for the Keystone Implement Co., to be 73x127 feet in size and five stories high, built of pressed brick, with stone foundation, have gravel roof, composition sidewalks, prismatic sidewalk lights, architectural ironwork, iron beams and columns, wood mantels, plate glass, speaking tubes, grates, one hydraulic elevator, steam heating, steam pipe covering, ventilators, plumbing, washstands, water and gas fixtures; cost \$30,000.

**Loch Lynn Heights, Md.—Hotel.**—The Loch Lynn Heights Hotel Co. (office, Wheeling, W. Va.), lately chartered, has let contract to the Enos R. Williams Co., of Cape May, N. J., for the erection of a hotel. The building will be 25x80 feet in size.

**Louisville, Ky.—Robert D. Payton** has obtained permit to erect a brick building to cost \$500.

**Louisville, Ky.—Cottages.**—Louis Krieger has prepared plans for four cottages to be erected for Julius Wanner to cost \$6000, to be 20x45 feet in size, built of brick, with stone foundations and trimmings, have tin roofs, galvanized-iron cornices, cement sidewalks, mantels, plate and stained glass, blinds, electric bells, gas fixtures, grates, bathroom outfits, plumbing, washstands, water-closet fixtures.

**Louisville, Ky.—Stores, etc.**—Clarke & Loom's have prepared plans for a block of stores and flats to be erected for M. J. Doyle to be 75x100 feet in size and three stories high, built of pressed brick and terra-cotta, with all latest improvements, at a cost of \$22,000.

**Louisville, Ky.—Residence.**—Drach, Thomas & Bohne have prepared plans for a residence to be erected for Ed F. Kesler. It is to be 47x69 1/2 feet in size and three stories high, built of pressed brick, with stone foundation and trimmings, galvanized-iron cornices, composition sidewalks, mantels, plate and stained glass, blinds, electric bells and lighting, gas fixtures, grates, bathroom outfit, plumbing, washstands, water-closet fixtures; cost \$6200.

**Marcelline, Mo.—Bank Building.**—The Santa Fe Exchange Bank will erect a new building.

**Marietta, Ga.—School.**—Henderson & Austin, of Canton, have contract to erect school building in Marietta.

**Mobile, Ala.—Church.**—Contract has been let to the Gilbert Manufacturing Co. for making \$20,000 worth of improvements to the St. Francis Street Methodist Church.

**Nashville, Tenn.—State Prison.**—Contract for building the main prison (for the State) has been let to J. P. Fulcher & Co., of Nashville; about \$350,000 will be expended, and work will commence at once.

**New Orleans, La.—Dwellings.**—T. A. Clayton will erect a two-story dwelling to cost \$4500. Charles Steidinger will erect a dwelling to cost \$3500.

**New Orleans, La.—Dwelling.**—Mrs. Levy 416 Thalia street, will erect a \$10,000 dwelling; W. A. Bird prepared plans.

**Nocona, Texas—School.**—Contract for erecting a new stone schoolhouse has been let to Matlock & Hudson.

**Norfolk, Va.—Business Building.**—Plans have been prepared for a six-story building 100 feet square which is to be built on a site lately purchased by Watt, Rettew & Clay. D. McCormick has plans for the building.

**Piedmont, W. Va.—Hotel.**—Clark Kincaid will build a three-story hotel.

**Pocahontas, Va.—Courthouse, etc.**—The city will build at once a courthouse and jail, the upper part to be used for opera house; size of house 50x90 feet, two stories high, of brick; E. Goodman, chairman of council.

**Rockdale, Texas—City Hall, etc.**—The city contemplates the erection of a public building for a city hall, courts, etc. Address the mayor.

**Somerville, Tenn.—Bank Building.**—The Fayette County Bank will erect immediately a three-story brick and iron-front bank building, thirty feet front by sixty-two feet deep, which, when completed, will be not only one of the handsomest bank buildings in the State, but one of the most convenient and best appointed. Address A. J. Rooks, cashier.

**Staunton, Va.—Temple.**—The Masonic lodge has secured a site for its proposed new temple. Address Wm. A. Burke.

**St. Louis, Mo.—Stable.**—Eames & Young, 204



North Eighth street, have prepared plans for a stable to be erected for D. R. Francis, to be 37x52 feet in size and two stories high, built of pressed brick, with latest improvements, at a cost of \$5000.

**St. Louis, Mo.—Dwelling.**—Charles Cabanne has obtained permit to build a \$10,000 dwelling.

**Tallahassee, Fla.—Market.**—Gilman & Davis have prepared plans for a market-house which the city will erect at a cost of from \$5000 to \$8000.

**Tampa, Fla.—Church.**—McGeckin & Jay have prepared plans for a new church for the African Methodist Episcopal congregation; the structure will cost \$10,000.

**Temple, Texas—Depot.**—The Missouri, Kansas & Texas Railway will soon commence work on the erection of a new depot.

**Vineville, Ga.—Church.**—The Methodists will endeavor to raise \$15,000 for the erection of a new church building. Address Rev. J. E. Wray.

**Washington, D. C.—Temple.**—The National Spiritualists' Association contemplates building a temple. Milan C. Edson can be addressed.

**Washington, D. C.—Dwellings, etc.**—Building permits have been issued to Geo. C. Bloomer for six brick dwellings, 1208 to 1218 T street, three stories and cellar, 17x36, back building two stories and cellar, 18x12, press-brick front, flat tin roof, circular bay windows; cost \$19,000; R. Crump, architect; T. A. Blundon, builder; and to J. E. Connelly for a brick warehouse to cost \$4000; J. A. Rodbird, builder.

**Washington, D. C.—Dwellings, etc.**—R. J. Beall, Jr., has prepared plans for a \$20,000 block to be built by D. B. Gotwalls. Leo Simmons has prepared plans for an \$8000 residence to be built on Yale street. J. D. Burn will erect a block of four dwellings to cost \$10,000. J. C. Williams has obtained permit to build a \$5000 residence. E. Whyte has obtained permit to build a \$5000 store and dwelling.

**Waxahachie, Texas—Courthouse.**—Plans, specification and bids for Ellis county's new courthouse will soon be opened, October 30 being the date set.

**Weston, W. Va.—Asylum Buildings.**—The board of directors of the asylum will petition next legislature for \$90,000, to be expended on new buildings and other improvements.

**Winchester, Ky.—Mercantile Building.**—The J. T. Day Grocery Co. will erect a four-story business building, 91x40 feet.

**Winston, N. C.—Warehouse.**—J. W. Grainger and others will build a warehouse in the spring.

## RAILROAD CONSTRUCTION.

### Railroads.

**Greenville, Texas.**—It is expected that a proposition will soon be made for building the Texas Midland Railroad from Greenville to Waco and Paris. Mrs. Hetty Green, of New York city, owner of the property, will, it is understood, make an inspection of the country from Greenville to Paris with a view towards such an extension. E. H. R. Green, president, Terrell, Texas, can give information.

**Hendersonville, N. C.**—Surveys have been completed and rights of way secured for building twenty four miles of standard-gauge railroad from Hendersonville to Brevard. Henry M. Warren & Co., 115 Broadway, New York city, are prepared to receive bids for construction and equipment; work to commence at once and be completed in seventy-five days. No contracts for rails, bridges or any material have been awarded.

**Pineville, Ky.**—The directors of the Pineville, Mt. Pleasant, Elkhorn & Big Stone Gap Railroad have, it is stated, arranged for commencing work on the enterprise.

**Quinnimont, W. Va.**—Contract has been awarded to E. S. Whitney, of Allentown, Pa., by the Quinnimont Coal Co. for extending its standard gauge railroad from the company's coke-oven plant up Laurel creek about four miles. The contract includes the grading, bridging, tracklaying and ballasting complete, ready to suit in traffic. Work has been commenced and will be pushed to rapid completion.

**San Antonio, Texas.**—William Davis, president of the San Antonio & Gulf Shore Railroad Co., has contracted for material and equipment for the first thirty miles of his road.

### Electric Railways.

**Baltimore, Md.**—Efforts are being made to induce the Baltimore City Passenger Railway Co. to extend its electrical line to Westport.

**Jackson, Tenn.**—The Jackson & Suburban Railway Co., J. H. Hunter, president, will probably soon begin the construction of its electrical railroad.

**Newberry, Fla.—Electrical Railroad.**—The Victoria Phosphate Co. contemplates operating its railroad by electricity. Address J. A. Little, president, at Jacksonville, Fla.

**New Orleans, La.**—At a meeting of stockholders of the Orleans Railroad Co., L. H. Pettipain, secretary, to be held on November 7, the company will decide to adopt electricity as a motive power. Several meetings to decide on such a change have

already been held, but the proposition always failed for want of sufficient support. A majority of the stockholders are now in favor of the proposition. About \$240,000 will have to be expended.

## MACHINERY WANTED.

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The MANUFACTURERS' RECORD has received during the week the following particulars as to machinery that is wanted.

**Belting.**—J. W. Dalton, Boonesville, Va., wants prices on belting.

**Boiler.**—The Porter-McNeal Co., Norfolk, Va., wants to buy a good second hand stationary return tubular boiler cheap.

**Bolt and Upsetting Machine.**—The Vulcan Road Machine Co., Charlestown, W. Va., wants prices and information of a bolt and upsetting machine.

**Bolt Header.**—Blue Bros., Laurinburg, N. C., are in the market for a hand bolt header.

**Boring and Turning Mill.**—Wanted, a six or eight-foot turning mill, second-hand. Give full description. Address Lock Box 102, Erie, Pa.

**Box Machinery.**—J. C. Brewbaker, Botetourt, Va., wants box machinery. Quote best prices, with discount and lowest terms; second hand machinery will do.

**Building Material.**—The McCullough Iron Co., North East, Md., will buy building material, wood or steel.

**Can Machinery.**—J. D. Bradshaw & Son, Burkeville, Va., want a full line of machinery for manufacturing cans.

**Canning Machinery.**—S. P. Stultz, Huntington, Ind., is interested in starting canneries. He would probably be pleased to receive catalogues.

**Canning Machinery.**—E. V. Harrison & Co., Clarksville, Tenn., want quotations on canning machinery.

**Cotton-mill Machinery.**—The Swift Cotton Mills, Elberton, Ga., will buy two spinning frames, three-inch space, two-inch ring, 160 spindles each; one slubber 6x8, ninety-six spindles; one drawing frame, and a rope machine.

**Dynamo.**—J. H. Woody, Asheville, N. C., wants a small dynamo from ten to fifteen-light power for lighting shop, with lowest quotations on net cash prices.

**Electric-light Plant.**—Holt, Gant & Holt, Elon College, N. C., want an incandescent electric-light plant of 300 lights, sixteen candle-power each.

**Electrical Railroad.**—The Victoria Phosphate Co., J. A. Little, president, Jacksonville, Fla., may want equipment, etc., for an electrical railroad.

**Emery-wheel Stand, etc.**—Blue Bros., Laurinburg, N. C., want an emery-wheel stand and countershaft to carry two wheels up to twelve inches diameter.

**Engine.**—J. C. Brewbaker, Botetourt, Va., wants best prices, lowest terms and discount on an engine (second hand).

**Engine.**—D. 495, Sun Office, Baltimore, Md., wants a thirty to thirty five horse power second-hand automatic cut-off engine; must be in first-class condition.

**Engines.**—The Panther Lumber Co. wants a second-hand 18x24 engine, right-hand, and one 16x24 or 18x24 engine, left-hand. Address John Van Patten, Dotson, W. Va.

**Engines.**—See "iron-mill machinery."

**Flour-mill Machinery.**—J. W. Dalton, Boonesville, Va., wants prices on French burrs.

**Furniture Machinery.**—The High Point Furniture Co., High Point, N. C., will want full outfit of machinery for manufacturing furniture.

**Gas Engine.**—A. Northrop & Co., Pittsburg, Pa., want a good gas engine of five horse-power, second-hand. State make, time in use and lowest price.

**Gas or Gasoline Engine.**—S. M. York, Cleveland, Ohio, wants a second-hand gas or gasoline engine, no matter in how bad shape if of good make, for cash.

**Hydraulic Presses.**—The Corsicana Cotton Oil Co., Corsicana, Texas, is in the market for one to three second hand Taylor hydraulic presses.

**Ice Plant.**—C. H. Coffield, Rockdale, Texas, solicits correspondence from manufacturers on a seven-ton ice plant.

**Iron-mill Machinery, etc.**—The McCullough Iron Co., North East, Md., will buy bar mills for mak-

ing six and eight-inch bar, housings and all complete, two engines, injector, etc.

**Ironworking Machinery.**—S. M. York, Cleveland, Ohio, wants ironworking machinery (second-hand).

**Lathes.**—Thomas Bailey, Athens, Ga., wants a 50-inch lathe, ten or twelve feet between centres; a 20 or 24 inch lathe twenty feet between centres; a 40x40-inch planer and saw; also three or four smaller lathes.

**Lath Machinery.**—Kincaid & Bro., Rock Cut, N. C., will probably buy lath machinery.

**Machine-shop Equipment.**—Thomas Bailey, Athens, Ga., will buy complete equipment of machinery for foundry and machine shop.

**Marine Engine.**—Wanted, a marine vertical engine, new or second-hand, must be in good condition, eighty to 100 horse-power, and a steam force pump. Address Box 573, Springfield, Ohio.

**Oil-mill Machinery.**—J. B. Wooten, Morrilton, Ark., wants bids on the equipment of a 20-ton cottonseed-oil mill.

**Palmetto Broom and Hat Machinery.**—A. H. Agnew, Kendrick, Fla., would be pleased to have information on machinery for manufacturing palmetto into brooms, hats, etc.

**Planer and Jointer.**—Lock Box 252, Tampa, Fla., wants a four-side planer and jointer twenty-four inches wide, not less than three inches thick; must be in good condition and low-priced.

**Planing-mill Machinery.**—E. J. Wood, Morgantown, W. Va., may need some planing-mill machinery.

**Piping.**—The McCullough Iron Co., North East, Md., will buy piping.

**Press.**—A. 447, Sun Office, Baltimore, Md., wants an eighth medium press for spot cash.

**Pulleys, etc.**—J. W. Dalton, Boonesville, Va., wants prices on pulleys and shafting.

**Pump.**—See "marine engine."

**Rock Crusher.**—B. Eaves, 1005 Basin Bank, Richmond, Va., is in the market for a second-hand rock crusher (Blake, Dodge or Gates).

**Roofing.**—The High Point Furniture Co., High Point, N. C., will want roofing.

**Roofing.**—E. V. Harrison, Clarksville, Tenn., will want a carload of No. 1 steel roofing.

**Saw.**—Pike Bros., La Grange, Ga., are in the market for a band saw not less than 36 inch wheel, new or second-hand.

**Saws.**—Kincaid & Bro., Rock Cut, N. C., will buy gang and rip saws.

**Saw-mill Equipment.**—P. O. Box 122, Norfolk, Va., wants to buy a good second-hand steam "shot-gun" saw-mill feed, seven or eight-inch.

**Saw Mill, etc.**—J. C. Brewbaker, Botetourt, Va., wants best prices, terms and discount on saw mill, planer, resawing machine and cut-off saw; second-hand will do.

**Shafting.**—The High Point Furniture Co., High Point, N. C., will want shafting.

**Slitting Machine.**—The Manly Manufacturing Co., Dalton, Ga., wants a machine for slitting No. 30 gage sheets into strips 3x4 inches wide.

**Tank Cars.**—The Corsicana Cotton Oil Co., Corsicana, Texas, is in the market for two or three second-hand tank cars of 5000 to 7000 gallons capacity each.

**Wagon Machinery.**—M. S. Farmer, Flat Rock, N. C., wants information regarding wagon machinery, cost of same, etc.

**Water Wheels.**—J. W. Dalton, Boonesville, Va., wants prices on turbine wheels.

**Water Works.**—Bids will be opened at Cameron, Texas, on October 25 for the construction of a system of water works after plans and specifications now to be seen at the office of C. W. Lawrence, secretary and treasurer. Address Mr. Lawrence.

**Woodworking Machinery.**—Pike Bros., La Grange, Ga., are in the market for single-spindle shaper, pony planer and carving machine, new or second-hand.

## TRADE NOTES.

WHAT would seem to be an unusual bargain in Texas lands is presented by a card to be seen in our advertising columns.

THE Newport News Shipbuilding & Dry Dock Co., Newport News, Va., has been awarded contract by Punta Gorda (Fla.) parties for building a tugboat ninety-five feet long.

THE Sturtevant Mill Co., of Boston, Mass., is erecting 15-inch Sturtevant emery mills for the Carolina Sulphuric Acid Co., at Blacksburg, S. C. This company is also erecting vertical emery mills for the Mathieson Alkali Co., of Saltville, Va.

GOLD MEDAL.—The J. A. Fay & Egan Co., of Cincinnati, Ohio, writes the MANUFACTURERS' RECORD that it has received a cable notifying it that the gold medal was awarded to it for its fine display, its superb construction and wonderful ingenuity of the various woodworking machines it had on exhibition at the Antwerp Exposition.

AN opportunity is offered by the Watts Campbell Co., of Newark, N. J., to parties desiring to secure a Harris-Corliss steam engine at a bargain. This engine will be taken out about November 1 and offered for sale. It is described in our advertising columns.

THE copartnership heretofore existing between L. C. Frazer and D. P. Dozier, under the firm name of Frazer & Dozier, at Columbus, Ga., has been dissolved, and Mr. Frazer will continue the hardware business, and hopes to retain the confidence of former friends and correspondents.

AMERICAN machinery forces its way wherever a wheel is turned or mechanism required by its superior points of excellence, and it is interesting to note the preference with which our machinery is meeting in foreign countries. Take, for instance, canning and can-making machinery. Foreigners engaged in this industry look to the United States for the latest improvements. Recently a shipment of a large lot of can-making machinery to Australia was made by G. A. Crosby & Co., of Chicago, Ill., and this firm is now shipping a fish-canning plant to New Zealand. Another order for a similar plant going to New Zealand has also been booked. These orders indicate that the creditable performances of the many plants put up in this country have reached the ears of the foreign canners, and they are availing themselves of the same facilities.

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